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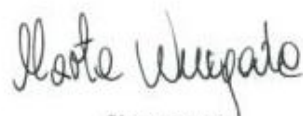
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Research Papers

A CASE STUDY ON THE WORKING CONDITIONS OF TEACHERS IN SELF FINANCE COLLEGES AT SARDAR PATEL UNIVERSITY VALLABH VIDYANAGAR

Dr. Mehul Patel

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ABSTRACT

Monetary catastrophes which have lower down the quality of higher education hence; institutions have decided for alternative source of finance. This has given way to introduction of self financing courses in higher educational institutions. The aim of this study is to aware the working conditions of the teachers in self-financing courses in colleges under Sardar Patel University. A sample of 250 teachers working in the self-financing courses was selected purposively and self-structured questionnaire and interview schedule were used for the study. The findings of the study highlight that although the teachers are highly qualified yet their appointment is purely temporary in nature. In fact the pay structure is also not satisfactory and the teachers do not avail any specific benefits. The study also highlight that the teachers have problems like insecurity of job, pay structure, etc.

Keywords: Higher education, working conditions, self financing courses

1.0 INTRODUCTION

Education is extremely important for the development of a nation. It is the process of instruction aimed at all round development of youth. Education enables people to contribute to societal development. Education has the responsibility for transferring human beings into human resources. Education, at the individual level helps in the process of socialization. At the level of society, it ensures that the traditional wisdom passes from one generation to the other and the new and modern knowledge is imbibed by the present generation. Higher education in India has been perceived in context of globalization and privatization in the present society. It acts as a powerful instrument in making India a knowledge-based society. The expansion of higher education in India is basically depended upon public finances provided by the government. This has however, resulted in financial crises which have further lower down the quality of higher education. Henceforth, to deal with financial crisis in higher education, institutions have opted for alternative source of finance. This has given way to introduction of self financing courses in higher educational institutions. These courses have also given opportunities to the students to explore various courses which were left away due to lack of financing by the governmental machineries.

1.1 MEANING OF SELF FINANCING INSTITUTIONS

According to L.C.Singh and Sudarshan Mishra (2008), self financing institution implies those institutions that are managed by private funds and private management without an apparent motive of commercialization. A self-financed college in India is one which does not receive any financial aid from the Central Government or from the State Government. They also do not get any financial grant from the UGC nor do they get any benefits from the UGC. Such an institute finances itself through the fees paid by the students who enroll for the courses and may get private financing from other sources, such as a corporate house. Self-financing programmes are the programmes which are financed by charging user fees from students. There is almost no government subsidy for such self financing programmes. The nature of self financing programmes depends on the institutional mode under which it is delivered.

2.0 SIGNIFICANCE OF THE STUDY

Privatization of higher education has emerged in numerous forms in the recent decades in India such as privatization, higher education institutions in the form of introducing self-financing courses; converting government aided private institutions into private self financing institutions and expansion of self-financing private institutions. The main aim behind launching self-financing courses was to vocationalised higher education. The policy of the University Grants Commission (UGC) was to equip students through these courses with some practical knowledge along with the bachelor's degree. The nature of self-financing course depends on the institutions and organization under the fold of the management. Colleges slowly and gradually found this as an opportunity to attract students and raise the financial resources as it was becoming difficult to launch new courses without the subsidy of the government. In the last few decades sprouting of self financing institutions and its greater participation also have resulted in creating job opportunity for the teachers. Along with this, it is every important to create a conducive environment and work climate for the teachers. Thus this paper tried to make a humble attempt to study the exiting working conditions of teachers in the self financing colleges.

3.0 LITERATURE REVIEW

There were many studies undertaken which reveal the working conditions of teacher in self sustaining courses in higher education. Few of them are mentioned below. Das (2012) studies on self financing schemes in post graduate courses of government sponsored college. The study reflects that the parents and guardians are willing to spend high fees structure and in fact the fees structure has not become the barrier in availing higher education. The demand for the self financing courses is also high and has generated job opportunities. Yet the college has suffered from problems like shortage of books in library, inadequate infrastructure, etc. Shetty and Gujarathi (2012) found that 78% of faculty members were dissatisfied with their jobs and expressed high level of professional dissatisfaction. They have expressed their high workloads which have hampered their research work. The factors that have discourage the professional growth were job insecurity, lack of support, low salary, and poor relationship with colleagues. Ahluwalia and Preet (2014) found that the most important factor responsible for job satisfaction among college and university teachers are possibility of growth and administration followed by salary, hygiene, infrastructure, interpersonal relations in profession and unbiased administration. Clarke, Kenny, and Loxley (2015) found in the study that apart from science and technology other subjects don't get sufficient funding. Yet the teachers engaged in the IT sectors, the high teaching workload left very little time to engage in research. It also show that excessive workloads and conflicting role demands have lead to negative work experience. Singh and Singh (2015) studied on quality of work life of teachers working in higher educational institutions. This study focuses on quality of work life under various dimensions. The QWL (quality of work life) facilitates the job satisfaction, performance and personnel as well as institutional effectiveness. Arunkumar and Saminathan (2017) found that heavy workload, long hours of work, manpower shortage problems are the major causes affecting their physical health. In fact the cause of stress has also resulted in friction with colleagues, inappropriate task and insufficient skills.

4. STATEMENT OF THE PROBLEM

The present study aims at studying the working conditions of the teacher in self sustaining courses. It also try to analyses the problems faced by them. Thus the title has been formulated as:- A CASE STUDY ON THE WORKING CONDITIONS OF TEACHERS IN SELF FINANCE COLLEGES AT SARDAR PATEL UNIVERSITY VALLABH VIDYANAGAR.

5. OBJECTIVES

The present study has formulated the following research question as

(1) To study the socio economic background of teachers in self financing courses

(2) To study the working conditions of teachers in self financing courses

(3) To study the income pattern of teachers in self financing courses

(4) To study the other benefits available to teachers in self financing courses

(5) To study the problems of teachers in self financing courses

(6) To suggest policy recommendations

6. DESIGN OF THE STUDY

6.1. Methodology: The present study is based on descriptive study method. It is design particularly to obtain pertinent and precise information concerning the current status of phenomena and whenever possible, to draw valid general conclusion from the fact discovered. They are restricted not only to facts finding but may often in the formulation of important principles of knowledge and solution of significant problems concerning local, state, national and international issues.

6.2. Population and Sample: The population the study under consideration includes the teachers working self financing courses in the Sardar Patel University. The present study aimed at investigating working condition of the teachers in self sustaining courses in the undergraduate colleges under Sardar Patel University and so for this purpose non-probability sampling technique has been used. Further purposive sampling technique is used to select the sample for the study. A sample of 250 teachers working in the self financing courses was selected purposively.

6.3. Tools: One self structured questionnaire has been used to collect necessary information on working condition of teachers in self sustaining courses as well as the problems faced by them.

7.0 ANALYSIS AND INTERPRETATION OF DATA

The resulting data are analyzed objective wise by using appropriate statistical treatment. The results have been explained below:

Table -1: Working hour and Work load

Working hour/week	Percentage	Work load(classes) / week	Percentage
42	38%	36	10%
40	26%	30	42%
36	07%	26	29%
30	21%	24	11%
18	08%	18	08%

The table no 1 shows that 38% of the teachers have the 42 working hour per week while 21% work for 30 hours and 8% work for 18 hours. In case of workloads (classes) per week 10% have 36 classes per week while 42% have 30 classes i.e., on average 5 classes.

Table -2: Income pattern

Income structure	Income per annum	Percentage
Fixed scale of pay	< 2lacs	70%
Consolidated(lump sum)	2-5lacs	28%
Hourly basis	5-10lacs	2%

This table shows that 60% gets their salary in form of fixed scale of pay while 38% receive as consolidated pay. Infect only 2% of teachers have annual income of 5-10 lacs.
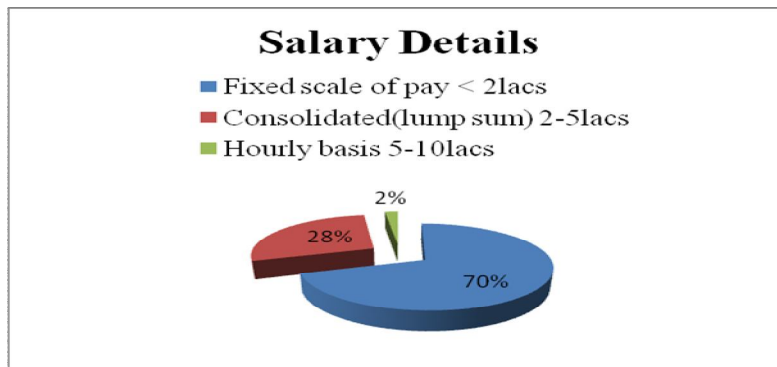
Figure-1

Table -3: Leave structure

Type of leave	Percentage
Casual	100%
Medical	12%
Duty	28%
Special	10%

Regarding the leave structure, table no 3 shows that all the teachers can avail casual leave. These leaves are 12 days in a year. However, only 12% can avail medical leave and 28% were entitled with duty leaves. However only 10% of teachers have been entitle with special leave of 15 days.
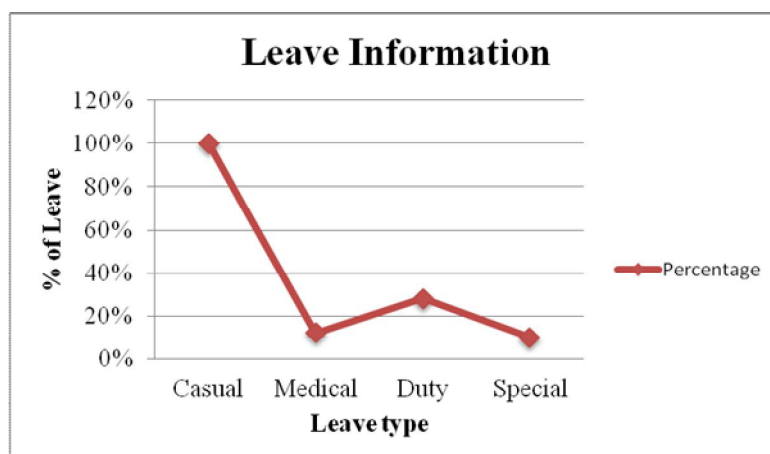
Figure-2

Table -4: Various Problems

Problems	Percentage
Security of jobs	87%
Payments/salary	72%
Vacation salary	45%
Leave	39%

Table 4 of the study shows that 87% were insecure regarding their job.72% have highlighted that their faced problems regarding their salary and 45% of the teacher do not get any salary during their vacation. In fact 39% opines that they face problems in matter of leave.
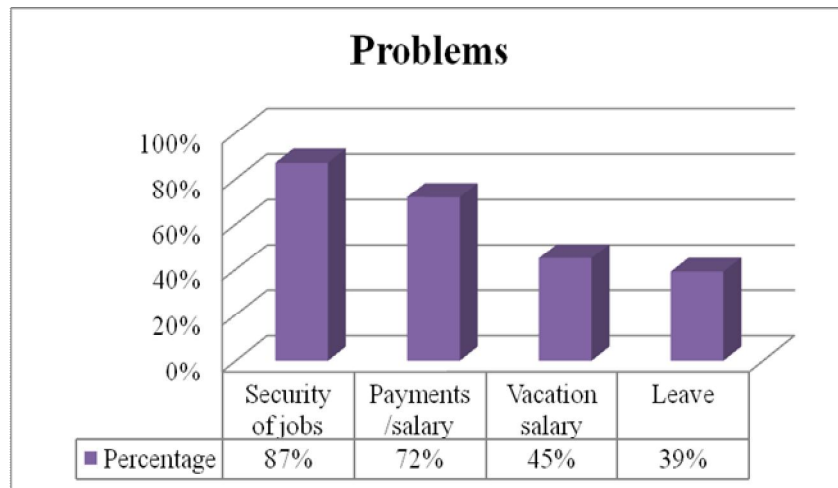
Figure-3

8. FINDINGS AND DISCUSSIONS
The findings were discussed below

- It has been observed that different methods were used for selection of teachers in self financing courses. The study show that majority of teachers (86%) got selected through walk-in interview process. While 14% were selected through proper interview process by advertisement given in local and national newspapers followed by the interviews by the selection committees.

- The study reveal that the type of appointment is basically contractual with 65%, 19% of teachers were non sanction and 16% were of AD-HOC nature. This highlights the fact that the posts of teachers was neither of permanent nor sanction post. Yet appointment letters were issued to the teacher clearly mentioning the terms and conditions of the job.

- In case of contractual type of teachers, 65% teacher yearly appointment was given but 17% of teachers were given appointment for either 9 or 10 months. This kind of appointment often de-motivates these teachers and creates a sense of insecurity of the jobs.

- The study shows that 38% of the teachers have the 42 working hour per week while 21% work for 30 hours and 8% work for 18 hours. In case of workloads (classes) per week 10% have 36 classes per week while 42% have 30 classes i.e., on average 5 classes.

- Apart from the teaching duties, the teachers were engaged in various additional duties of the colleges.47% of teachers were engaged in various committees of the colleges while only 27% were members of co-curricular activities. These activities include welfare development programme of the college, students welfare committee, co-curricular committee, website development committee, college magazine and newsletter committee etc.

- As per the pay pattern in self –financing courses, it was observed that majority of the teachers 70% gets their salary in form of fixed scale of pay while 28% receive as consolidated pay. In fact only 2% of teachers have annual income of 5-10 lacs.

- Regarding the leave structure, table no 3 shows that all the teachers can avail casual leave. These leaves are 12 days in a year. However, only 12% can avail medical leave and 28%were entitled with duty leaves. These duty leaves were basically used by the teachers to participate and attend seminar/conference/workshop at different level. However only 10% of teachers have been entitle with special leave of 15 days.

- With regards to the educational level, it is significant to note that all teachers were highly qualified. All the teachers have completed their Master degree. Yet 23% of the teachers had qualified NET and only11% had qualified SET. 8% of teachers had M. Phil and 13% had PhD degree while 24 % teachers were pursuing PhD.

- Regarding the refresher and orientation courses, 3% of teachers have done refresher courses for their career and academic enhancement. Regarding minor and major research project, only 2% teacher did their minor research independently while only 1 teacher did a major research sponsored by DBT.

- The problems faced by teachers at their workplace were of different types. Majority of the teachers (91%) have insecurity regarding their job and service. Apart from these many teachers have issues related to working condition, absence of medical benefits, pay structure etc.

- The teachers have put forward certain recommendations for enhancement and enrichment of the teachers in self financing courses. These suggestion included mode of selection through proper interview process, pay structure based on UGC scale, provident fund for future security, better annual increment etc.

9. CONCLUSION

Indian higher education system has undergone massive expansion since independence. Privatization and globalization have resulted and encouraged higher education through self-financing courses. Along with the increase in opportunities, it has become a market of temporary job for highly qualified teachers. The present study has made a humble attempt to study the working conditions of teachers in self-financing courses. Although the teachers are highly qualified yet their appointment is purely temporary in nature. In fact the pay structure is also not satisfactory and the teachers do not avail any specific benefits. The study also highlight that the teachers have problems like insecurity of job, pay structure, etc. An educational system can adapt to the changing needs of a changing society. Privatization and self financing course is the need of the hour. A realistic policy by the policy makers as well as the government can certainly help to protect and enhance the working conditions of teachers in self-financing courses.

10.0 REFERENCES

1. Ahluwalia, K. D., & Preet, K. (2014). An empirical study on job satisfaction amongst college and university teachers. Pacific Business Review International, 52-57.

2. Arunkumar, B., & Saminathan, R. D. (2017). Work life balance among women teachers of self financing colleges(SFC) in Thanjavur District, Tamil Nadu. IOSR Journal of Humanities and Social Science , 48-55.

3. C.R.Kothari. (2508). Research Methodology-Methods and Techniques. New Delhi: New Age International(P) limited, publishers.

4. Clarke, M., Kenny, A., & Loxley, A. (2015). Creating a supporting Working Environment for Academics in Higher Education. Dublin, Ireland: Irish Federation of University Teachers and Teachers' Union of Dublin, Ireland.

5. Dr, S. R. (2012). A study of faculty job satisfaction and its impact on student satisfaction in management Institutes of Nashik District affiliated to University of Pune. IOSR Journal Of Business and Management , 01-08.

6. Kumar, D. S. (2012). Self-Financing Scheme In Post-Graduate Courses Of Government-Sponsored College: A Case Study. International Journal of Multidisciplinary Management Studies Vol.2 Issue 1 .

7. Kumar, R. (2016). Research Methodology-A step by step guide fro beginners. Nodia: Pearson India Educational Services Pvt. Ltd.

8. Prasenjit, B. J. (2016). Higher Education in India: Recent Issues and Trends. Research Journal of Educational Science , 10-16.

9. Shanthi, J. V. (n.d.). Occupational Stress -A Study on Teachers Working In Self Financing Colleges in Chennai . IOSR Journal Of Humanities And Social Science , 11-16.

10. Sidhu, K. S. (2507). Methodology of Research in Education. New Delhi: Sterling Publishers pvt ltd.

11. Singh, D. O., & Sandeep, S. K. (2015). Quality of work life of teacher working in higher educational Institutions : A Strategic Approach towards teacher's excellence. International Journal of Advance Research in Computer Science and Management Studies 180-186.

12. A study of working conditions of teachers in self financing courses in higher education institutions in Mumbai. Synopsis of thesis.

13. A study on the working conditions of teachers in self financing courses at UG level under Gauhati university, Paripex - Indian journal of research volume-7 | issue-3 | March- 2018

AN ANALYTICAL STUDY ON SOUND RECEIVABLES MANAGEMENT BY ALL INDIA REPORTERS AND ITS IMPACT ON PROFITABILITY

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ABSTRACT

Accounts receivable is an accounting transaction which deals with the billing of customer who owes money to a person, company or organization for goods and services that has been provided to the customers. In most business entities this is typically done by generating an invoice and mailing or electronically delivering it to the customer, who in turn must pay it within an established timeframe called credit or payment terms. Receivables management, also termed as credit management, deals with the formulation of credit policy, in terms of liberal or restrictive, concerning credit standard and credit period, the discount offered for early payment and the selection of best credit policy adopted by the organization. This research paper focuses on the receivables management of All India Reporter Pvt Ltd. Nagpur. The study of this research starts from collection of secondary data about receivables management and all the aspect which is helpful to know credit sales from the All India Reporter Pvt Ltd. The study will helps to understand the some important concept like optimum credit policy ,opportunity cost and also to know that whether factoring will benefited or not. In this study we have analyzed two aspects one is debtor's policy and second is factoring and their impact on profitability.

Keywords: Receivables Management, Opportunity Cost, Factoring, Credit policy, Net benifit

INTRODUCTION

When a firm sells its products or services and does not receive cash for it, the firm is said to have granted trade credit to customers. Trade credit thus creates receivables which the firm is expected to collect in the near future. There would be cash payment for goods and services by the buyer are made in a future period and customers from which receivables are collected in future period are called debtors.

Business enterprises today use trade credit as a prominent strategy in the area of marketing and financial management. Thus, credit is necessary in the growth of the business. Accounts receivables occurs if a company gets an order from a customer with payment terms agreed upon in advance. In most firms accounts receivables are executed by generating an invoice which is delivered to the customer, who in turn must pay within the agreed terms, for instance it can be net-30 meaning payment is due at the end of 30days..

Accounts receivable is an accounting transaction which deals with the billing of customer who owes money to a person, company or organization for goods and services that has been provided to the customers. In most business entities this is typically done by generating an invoice and mailing or electronically delivering it to the customer, who in turn must pay it within an established timeframe called credit or payment terms. Receivables management, also termed as credit management, deals with the formulation of credit policy, in terms of liberal or restrictive, concerning credit standard and credit period, the discount offered for early payment and the selection of best credit policy adopted by the organisation.

Account receivables management policy: To ensure optimal investment in receivables, a firm requires an appropriate credit policy. Kakuru (2000) define credit policy as a set of policy actions designed to minimize costs associated with credit while maximizing benefits from it. A firm's credit policy should maximize the firm's value. The firm's value is maximized when incremental rate of return is equal to incremental costs of funds used to finance the investment.

Credit policy refers to guidelines that are followed in managing credit in a business. Credit policy includes credit standards, credit terms and collection procedures. Credit policy is designed to minimize costs associated with credit while maximizing the benefits from it. This research paper focuses on the receivables management of All India Reporter Pvt Ltd. Nagpur. The study of this research starts from collection of secondary data about receivables management and all the aspect which is helpful to know credit sales from the All India Reporter Pvt Ltd. The study will helps to understand the some important concept like optimum credit policy ,opportunity cost and also to know that whether factoring will benefited or not. In this study we will analysis two parts one is debtor's policy and second is factoring.

OBJECTIVES OF THE STUDY

The basic objectives of the study are:

(i)   To determined the present credit policy of the organization.

(ii)   To find out the amount of profit forgone (as per the credit policy) by calculating opportunity cost.

(iii)   To determine the optimum credit policy, which will maximize the profit and value of the firm

(iv)   To find out whether organization will be better of by appointing a special agent for speedy recovery of credit.

ABOUT ALL INDIA REPORTER

Hundred years ago, The All India Reporter was conceptualized as a law journal reporting cases with its head notes from all High Courts across India and the Privy Council. Considering the infrastructural facilities available at Nagpur, it was a herculean task, but our founder Shri. V. V. Chitaley, took upon himself this task with selfless objective of serving his brethren in the legal fraternity. In those days such a comprehensive journal covering cases from all across India was not available. A practicing successful lawyer himself, he understood the needs of the lawyers. His aim was therefore prompt, accurate and reliable reporting at the most affordable price. All India Reporter, as an organization can take pride with all humility, as being a pioneer in the field of law publications and for revolutionizing the publication business. Apart from conceiving the first and only Pan-India Law Reports publication, we have many Firsts to our credit. The AIR Manual series, Digests on various topics, Exhaustive and most researched Commentaries on various Acts have all been published under the AIR banner. Apart from editorial excellence, the AIR has always believed in the   philosophy   of   "Optimum Service At The Most Economical Price". Though this mantra has now found place in all management practices, these values were imbibed by the Founder eight decades ago when the organization was operating in a near monopolistic market. And eight decades later, we are still guided by the gospel preached and practiced by our Founder. Its living testament is the unbelievable wealth of information which it provides to all its patrons at the most economical subscription rates in the industry.

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ABOUT THE CREDIT POLICY OF ALL INDIA REPORTER

On the basis of the secondary data we have calculated and analysed the best credit policy out of the several options available in front of the organisation. At present the organisation is allowing a credit period of 90 days to its customers. The organisation is contemplating to go either reduce the credit period to 45 days, because with the present policy the organisation is encountering, chances of bad debts 2%. The organisation has found that if it reduce the credit period then the chances of bad debts also reduced by 1%. Again saying that with the3 growing competition in the market the is being compelled to adopt a credit period of 120 days. Taking the following things into consideration the following table shows the calculation about the allowance of credit period with three options of present policy of 90 days and two proposed policy of 45 and 120 days respectively, along with other parameters taken into consideration. The following statement shows the evaluation of debtor's policy:

Statement showing the evaluation of debtor's policies (table no: 1)

Particular	Present Policy 90Days Rs.	Proposed policy 45 Days	Proposed policy 120 days
A. Expected profit (a) Credit sales	25,00,000	15,00,000	70,00,0000
(b) Total cost 1. Variable(80% of credit sales) 2. Fixed	20,00,000 272727	12,00,000 272727	56,00,000 272727
Total cost	**2272727**	**1472727**	**5872727**
(c)Bad debt (for90 days=2%,45days=1%,120days=3%)	50000	15000	210000
(d) Expected profit(a-b-c)	**177273**	**12273**	**917273**
B. Opportunity cost of investments in receivables	68182	22091	234909
c.Net benefits(A-B)	**109092**	**(9818)**	**682364**

(Source of data: All India Reporter 2017)

DESCRIPTION AND INTERPRETATION
On the basis of the calculation in statement table no: 1 following interpretation can be drawn

(i) On the basis of the past experience the company has noticed a chances of bad debts of 2% for present allowance of credit period of 90 days. On the same basis it has been estimated that there is every possibility of bad debts of 1% for proposed policy of 45 days credit period and 3% for 120 days credit period.

(ii) It is also been observed that the amount of credit sales decline from 25 lakhs to 15 lakhs if the credit period is reduced from 90 days to 45 days and the sales can be increased by Rs. 45,00,000 lakhs if the credit period increased to 120 days.

(iii) Again at the same time the opportunity cost of investment goes up proportionately, if we increase the credit period. Infact the opportunity cost is highest in case of credit period of 120 days.

(iv) In the end we can interpret that the net benefit is highest i.e. Rs. 6,82,364 in case for credit period of 120 days. In case of 45 days proposed credit period the Net Benefit is in negative i.e. – Rs. 9,818. The table no: 2 shows the calculation of opportunity cost.

Table No -2: (Calculation of opportunity Cost)

Opportunity cost

= total cost of credit sales* Collection period/360*required rate 0f return/100

Present policy= Rs.2272727*90-360*12% = Rs.**68181**

Proposed policy I =Rs1472727*45/360*12% = Rs.**22091**

Proposed policy II =R5872727*120/360*12% = Rs. **234909**

MANAGEMENT OF RECEIVABLES AND ITS IMPACT ON PROFITABILITY

As per the present credit policy of 90 days, we have noticed that the net benefit is Rs. 1,09,092 whereas the net benefit in case of 120 days goes up to Rs. 6,82,364. I clearly shows that if the credit period is being increased then the profit i.e. the net benefit goes up by 525% which is enough to raise ones eye brow. Again on the other hand the impact on net benefit is negative if the credit period is being reduced to 45 days. But the chances of bad debts increased from 2% to 3% if the credit period is increased again it may get reduced to 1% if the credit period reduced from 90 to 45 days. Therefore the management should contemplate to follow the proposed policy of 120 days since its net benefit is highest.

Secondly the organization is also contemplating for appointing a factor agent for the fast recovery of debts. For that the organization on the basis of certain criteria and available data has made certain calculation on the basis of which it can be decided whether to appoint a factor agent or not. The analysis and calculation for appointing a factor agent and its evaluation has been shown in the table no:3 & table no: 4 respectively.

IF COMPANY APPOINTING FACTOR FOR SPEEDY COLLECTION OF RECEIVABLE THEN WHAT IMPACT ON PROFITABILITY

Calculation of factoring commission, interest charges and advance granted by factor table no: 3

	Particular	Rs
A.	Average level of receivables(Rs. 25lakhs*90 days/360 days)	625000
B.	Less : factoring commission (1% of Rs.625000)	6250
C.	Less: factoring reserve (10% of Rs 625000	62500
D.	Eligible amount of advance (A-B-C)	556250
E.	Less interest charge (Rs 556250 * 15%90 days/360 days)	20859
F.	Actual advance granted (D-E)=	535391

Statement Showing the Evaluation of Factoring Arrangement table no: 4

	Particulars	Rs
A.	Annual benefits of factoring to the firm	
	Credit Administration cost avoided	110000
	Bad Debts avoided(2% of 25 lakhs)	50000
	Total=	**160000**

B.	Annual cost of Factoring to the Firm	
	Factoring Commission (1% rs25 lakhs)	25000
	Interest Charged By Factors on advance(Rs 20859*360 days/90 days)	83436
	Total=	**108436**
C.	Net annual Benefits of factoring to the firm	
	(A-B)=	**51564**

INTERPRETATION
As per above evaluation of factoring arrangement if company appointing factor in that case company will benefited by Rs 51564. At presently company there is no factor agent appointed by the company. After appointing factor there will be reduction in the credit administration cost and bad debts will also be decreased. As per above calculation it is evident that company should go for this method which will help the company to handle the receivab.es in better manner. Secondly the fast recovery of the amount will help in improving the liquidity aspect of the organization and the organization can invest the amount in some other fruitful venture. So by looking at the overall picture it is advisable for the organization to appoint a factor agent for its recovery. On the basis of evaluation of the factoring agreement it can be seen tha the firm will have net benefit of Rs. 51,564. This is the case of 90 days credit policy. Clearly if this policy can be adopted for 120 days credit the net benefit will go up even much higher than the present one.

FINDINGS AND CONCLUSION
From the finding it can be concluded that All India Reporter Pvt Ltd uses a stringent receivables management policy. The way receivables are managed profoundly affects profitability. In this research work it has been emphasized that receivables constitute a significant portion of the firm's current assets and thus should be managed properly.

RELATIONSHIP BETWEEN ACCOUNTS RECEIVABLES MANAGEMENT AND PROFITABILITY
It was found out that the relationship between receivables management and profitability was very strong. Thus the profitability of a firm will vary depending on the receivables management credit policy adopted by the AIR company. As per above calculation we found out that Proposed policy I for 45 days in which both the sale and profit i.e. net benefit are less than that of 120 days credit policies.

AS PER THE ABOVE CALCULATION THE FOLLOWING CONCLUSION HAS BEEN DRAWN
Impact on credit sales
As per present company 90 days credit policy the sales is Rs2500000 that will increase up to Rs 7000000 for 120 days credit policy and for 45 days credit policy sales will decrease up to Rs1500000. Bad debts in II policy will increased by Rs210000 ,as compare proposed policy I for Rs15000 and for present policy is Rs50000.

RECOMMENDATION & SUGGESTIONS
On the basis of the above descriptions, calculations and interpretations itis suggested that policy makers should have the interest in promoting efficient management of receivable management to facilitate performance management. It should therefore be the priority of top management of every firm to manage their trade credits prudently in order to remain profitable and competitive. Hence managers should know how and what receivable management structure will influence their performance. At this present set up it is recommended to go for credit policy of 120 days since it provides maximum net benefit. The organization should go for appoint the factoring agent for speedy collection of receivables thereby leading to Increase in net profit of the organization.

REFERENCES
1. Sharma & Gupta, 2014, Financial Management, New Delhi, Kalyani Publication.

2. Ravi Kishore, 2015, New Delhi, Cost Accounting and Financial Management ,Taxman Publlication.

3. Sarvanan P (2001), "A study on working capital management in Non-Banking Finance Companies", Finance India, Vol. XV, No.3, September, pp 987-994..

4. Dulta. J (2001), "Working capital management of Horticulture Industry in H.P – A case study of HPMC" Finance India, Vol.XV, No, 2, June, pp 644-657.

5. www.airwebworld.com

CASHLESS INDIA: AN OVERVIEW

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ABSTRACT

The RBI and the Government are making several efforts to reduce the use of cash in the economy by promoting the digital/payment devices including prepaid instruments and cards. Main objectives were to fight counterfeit money and black money. The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy.

Keywords: Cashless economy, digital/payment

INTRODUCTION

Economic development across all sectors is among the foremost priorities of the government. This study takes the various policies and initiatives of the Government in this regard. The RBI and the Government are making several efforts to reduce the use of cash in the economy by promoting the digital/payment devices including prepaid instruments and cards. RBI's effort to encourage these new varieties of payment and settlement facilities aims to achieve the goal of a 'less cash' society. Here, the term less cash society and cashless transaction economy indicate the same thing of reducing cash transactions and settlement rather doing transactions digitally.

Cashless transaction economy doesn't mean shortage of cash rather it indicates a culture of people settling transactions digitally. In a modern economy, money moves electronically. Hence the spread of digital payment culture along with the expansion of infrastructure facilities is needed to achieve the goal. On November 8th government withdrawn Rs 500 and Rs 1000 notes- two highest denominations in circulation. Main objectives were to fight counterfeit money and black money. The action has given tremendous boost to cashless transactions as card based and digital payments were not hindered when all high denomination cash transactions suffered because of absence of high denomination currencies.

OBJECTIVES OF THE STUDY

- To study the various modes of cashless transaction
- To study the benefits of cashless economy
- To study the challenges in making India a cashless economy

CASHLESS INDIA

The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. "Faceless, Paperless, Cashless" is one of professed role of Digital India. As part of promoting cashless transactions and converting India into less-cash society, various modes of digital payments are available.

These mode are
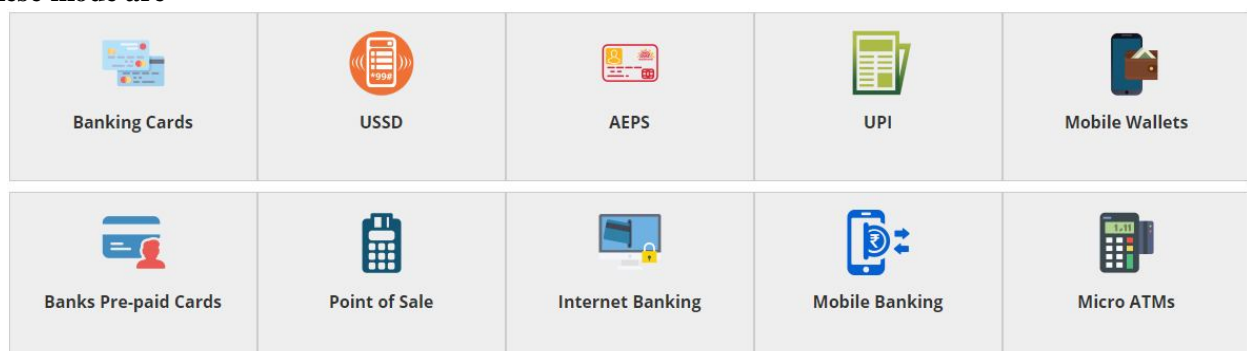
Source: http://cashlessindia.gov.in/digital_payment_methods.html

BENEFITS OF CASHLESS ECONOMY

Convenience

The ease of conducting financial transactions is probably the biggest motivator to go digital. You will no longer need to carry wads of cash, plastic cards, or even queue up for ATM withdrawals. It's also a safer and easier spending option when you are travelling.

An increased use of credit cards instead of cash would primarily enable a more detailed record of all the transactions which take place in the society, allowing more transparency in business operations and money transfers.

Go digital, get discounts

Service tax: Waiver of service tax of 15% on digital transactions up to `2,000.

Fuel: 0.75% discount on digital purchase of fuel through credit/debit cards, e-wallets or mobile wallets.

Rail tickets: 0.5% discount on monthly and seasonal suburban railway tickets from 1 January 2017. Online rail ticket buyers get up to `10 lakh free accident insurance too.

Rail catering: 5% discount on digital payments for railway catering, accommodation, retiring rooms, etc.

Highway toll: 10% discount on NH toll payment via RFID or fast-tags in 2016-17.

Insurance: 10% discount by government general insurers on premium paid online via their portals. 8% discount on new LIC policies bought online via its site.

POS: Rs 100 a month is the maximum rent that PSU banks can charge for PoS terminals.

Rupay: Kisan credit card holders to get RuPay Kisan cards.

CHALLENGES IN MAKING INDIA A CASHLESS ECONOMY

- Availability of internet connection and financial literacy.

- Though bank accounts have been opened through Jan Dhan Yojana, most of them are lying un operational. Unless people start operating bank accounts cashless economy is not possible.

- There is also vested interest in not moving towards cashless economy.

- India is dominated by small retailers. They don't have enough resources to invest in electronic payment infrastructure.

- The perception of consumers also sometimes acts a barrier. The benefit of cashless transactions is not evident to even those who have credit cards. Cash, on the other hand, is perceived to be the fastest way of transacting for 82% of credit card users. It is universally believed that having cash helps you negotiate better.

- Most card and cash users fear that they will be charged more if they use cards. Further, non-users of credit cards are not aware of the benefits of credit cards.

- Indian banks are making it difficult for digital wallets issued by private sector companies to be used on the respective bank websites. It could be restrictions on using bank accounts to refill digital wallets or a lack of access to payment gateways. Regulators will have to take a tough stand against such rent-seeking behavior by the banks.

CASHLESS PAYMENT SYSTEM

As the banking system evolved, it became easier, safe and even remunerative to keep one's money in a bank account and it became still easier and safe to use "transfer of money in bank accounts" for making payments for the economic transactions. This was more so for large value transactions. Actually, it is now used equally for effecting low value transactions also. For effecting this transfer of money in bank accounts, a payment instrument was needed to instruct the bank to effect that transfer. This instrument was the cheque for a very long period. Thus a system consisting of the cheque as the payment instruments and an infrastructure around the cheques consisting of the drawee bank, the drawer bank and the cheque clearing houses came on the scene and were known as the payment systems.

CONCLUSION

All the online market basically depends on cashless transaction system. The cashless transition is not only safer than the cash transaction but is less time consuming and not a trouble of carrying and trouble of wear and tear like paper money. According to behavioral finance theorists, the pain of parting with money is felt more acutely if you use physical cash instead of a card. With the developments in the information and communication technology, world over, different kinds of payment instruments and innovations in the instruments and the payment systems evolved.

BIBLIOGRAPHY

- Piyush Kumar "An Analysis Of Growth Pattern Of Cashless Transaction System" Vol. 3, Issue 9, Sep 2015, 37-44 © Impact Journals

- Speech delivered by Shri R. Gandhi, Deputy Governor at the Banaras Hindu University, Varanasi on Oct 22,2016.

- RBI Bulletin December 2016

- http://www.civilsdaily.com/story/cashless-society/

- http://cashlessindia.gov.in/digital_payment_methods.html

- https://thenextweb.com/in/2017/03/24/race-make-india-cashless-economy/#.tnw_Hb0e9ACy

- http://www.businesstoday.in/opinion/columns/money-today/cashless-indian-economy-%E2%80%93a-reality-/story/241987.html

- http://economictimes.indiatimes.com/wealth/spend/going-cashless-is-it-good-for-you/articleshow/55908649.cms

- http://economictimes.indiatimes.com/small-biz/security-tech/technology/innovations-for-cashless-economy-can-india-have-a-digital-sovereign-currency/articleshow/58431139.cms

- https://transformingindia.mygov.in/category/economy/cashless_economy/sh

- http://download.springer.com/static/pdf/

- http://data.conferenceworld.in/SGTB/P680-685.pdf

- http://www.allresearchjournal.com/archives/2017/vol3issue1/PartB/2-12-137-352.pdf

ECOTOURISM FOR SUSTAINABLE RURAL DEVELOPMENT: THE CASE OF THOMMANKUTHU ECOTOURISM SPOT IN IDUKKY DISTRICT OF KERALA

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ABSTRACT
Green economy – sustainable economic development through promotion of environmental protection side-by-side with economic activities – is one of the ultimate aims of policy makers the world over. In fact, these two goals (viz. economic development and environmental protection) are both intertwined in the concept of sustainable development (SD). While SD is the way to the end, the end is Green Economy. Because of the mutually conflicting nature of these two goals strategies for SD often demand large outlays and are less affordable. Besides, strategies towards SD are generally more problematic and less practically feasible, especially in developing countries like India which are starving for resources. In the above situation 'Ecotourism' assumes significance as an affordable and more practically feasible development model that is particularly relevant for developing nations like India. This paper seeks to examine the environmental impact of ecotourism, whether it can contribute towards employment creation and poverty reduction, its potential for socio-economic development of the local community and such other allied aspects. This empirical study is done with reference to a popular ecotourism destination named 'Thommankuthu' near Thodupuzha in Idukky District of Kerala. It is noted that there are obvious positive effects because of ecotourism in spite a few adverse impacts, and hence ecotourism need to be promoted. Accordingly, based on the findings of the study, suggestions for effective development of ecotourism for sustainable economic development are given.

Keywords: Tourism, Sustainable Development, Ecotourism, Rural Development.

INTRODUCTION
It is widely recognised that tourism is an industry with immense potential for employment generation and economic development. Hence tourism is promoted aggressively particularly by the nations developing nations like India. Globally, tourism is ranked second highest in terms of income generation, next to the oil industry. World over, tourism has transformed considerably from its earlier motivation i.e. religion and business to being a part of one's life style, even within research of classes other than aristocracy. Tourism is one of the world largest and most rapidly growing industries. Increased leisure and higher purchasing power have combined to enable more people take into tourism. Every country has a decisive role to play in tourism and tourism industry is projected as very valuable particularly for the development of international transport and communication. Of late, tourism industry is receiving good attention as a foreign exchange earner and in most parts of the world it is promoted primarily for the purpose of earning of foreign exchange. The disbursal of tourist expenditure on accommodation, food, transport, recreation and so on has a linkage effect leading to the overall development of a country. The percentage of receipts from international tourists in relation to gross national product is an indicator of the importance of tourism.

LITERATURE REVIEW AND RESEARCH GAP
The industry report by World Economic Forum (WEF) (2015) [28] 'The Travel and Tourism Competitiveness Report' has done a detailed study of the competiveness of various countries of the world, in the travel and tourism front. Competitiveness of nations at the regional and global levels based a number of well-defined parameters is dealt in the WEF report. As per WEF report, the global competiveness of Indian tourism is only 52 as against 17 in respect of China. This indicates a huge performance gap between the two comparable (and neighbouring) nations of the developing world. At the regional (Asia Pacific region) level too, there is a huge gap in the competitiveness, as India is in the 12th position whereas China is ranked in the 6th position. WTTC (2015) [31] in its latest report, 'Economic Impact of Travel & Tourism 2015 – Annual Update' has made an elaborate account of the relative performance of various countries of the world in the tourism front, including region-wise performance and future projections. WTTC has reported that South Asia, led by India and the Middle East, are globally the fastest growing regions in terms of the total contribution of Travel and Tourism to GDP. Accordingly, India is one among the bigger, fast growth markets along with China, Indonesia, South Korea and Turkey. Besides, WTTC has reported that South Asia will be the fastest growing sub-region for total Travel & Tourism GDP long-run growth to 2025 (7.0 percent) as India outpaces China. Empirical studies on ecotourism in the Indian context, particularly in the context of Kerala state in the Indian union are rather rare. Some relevant studies are briefly discussed here. Kumar, Yathish (2007) [11] has noted that the aim of tourism is to improve the quality of life of people, provide good experience to the tourists, and maintain the

environmental quality which is vital for both the tourists and the local populace. A macro level study done in the Kerala context by Manoj P K (2008) [15], 'Sustainable Tourism in India: A Study from a Global Perspective with Focus on Tourism Prospects of Kerala' points out the vast growth prospects of sustainable tourism in Kerala from a global perspective. The author has suggested some strategies for the faster growth of sustainable tourism with special reference to the Kerala state in India. In another Kerala-based study, Oommen M. A. (2008) [23] warned about the danger of overlooking the environmental sustainability in development activities in the state. While referring to the growing environmental issues in Kerala from the perspective of the state's economic development model viz. 'Kerala model of development' the author has pointed out in detail the environmental and ecological issues that the state faces at present; the current scenario being critically referred to as one of 'Ecological Overkill' in his paper. The day by day worsening situation of the natural environment in Kerala and its adverse impact on the long term sustainability of tourism has been noted by many researchers, pointing out the need for environment-friendly (nature-friendly) tourism models like ecotourism and its variants like rural tourism, responsible tourism etc. Notably, the macro level study by Manoj P K (2009) [16], 'Environment Friendly Tourism for Sustainable Economic Development in India', for instance, underscores the cardinal significance of tourism in India for its rapid economic development; and at the same time point out the need for promoting environment-friendly (and hence sustainable) tourism models. The author, thus, makes a few strategies for development of environment-friendly tourism in India. In his book on 'Ecotourism Development Management', Singh, Sarvjeet (2009) [25] has stated that ecotourism is entirely a new approach in tourism and it provides opportunities for visitors to experience powerful displays of nature and culture and to learn about the importance of biodiversity, conservation and local cultures. It focuses on volunteering, personal growth and finding innovative means to live on the earth. It involves travels towards locations wherein flora, fauna, cultural heritage etc. are the main attractions. It encourages the active participation by the local population in the conservation and education dimensions of tourism development process.

In a research article by Manoj P K (2010) [17], 'Tourism in Kerala: A Study of the Imperatives and Impediments with Focus on Ecotourism', the tourism sector in Kerala state in India is analysed in detail using the SWOT model. Accordingly, strategies are suggested for the faster and sustainable development of tourism in Kerala. Sudheer, B (2015) [26] in his research report submitted to University Grants Commission (UGC), New Delhi titled 'Economic and Cultural Impact of Responsible Tourism Initiative in Kerala – A Case Study of Kumarakom Panchayath' has highlighted the need for alternative and innovative practices like Responsible Tourism (RT) to minimise the negative effects of tourism on environment and to make it sustainable in the long-term. With respect to RT at Kumarakom in Kerala, the positive effects like employment to the local people, empowerment of women through RT-related activities (like, providing vegetables, fish, meat etc. often procured locally), positive linkage effects on the locality (like, earnings arising from the purchases made by tourists) etc. have been pointed out. An empirical study by Manoj P K (2015) (a) [18], 'Prospects of Ecotourism in Kerala: Evidence from Kumarakam in Kottayam District' focuses on ecotourism in Kerala and based on the findings of his study makes some suggestions for sustainable ecotourism development in the state. Another empirical study by Manoj P. K (2015) (b) [19], 'Employment Generation from Rural Tourism: A Field Study of the Local Community at Kumbalangi, Kerala' is based on the feedback obtained from the local community about their perceptions on the employment prospects of rural tourism, their expectations about the required Governmental interventions etc. The high prospects of employment generation and economic development on the one hand, and the need for enhanced tourism infrastructure, primarily through Government initiatives on the other hand are noted. Another study by the same author, Manoj P K (2016) [20], "Impact of Rural Tourism on the Environment and Society: Evidence from Kumbalangi in Kerala, India" in *International Journal of Advance Research in Computer Science and Management Studies (IJACSMS)* has pointed out the obvious positive effects of rural tourism but warned about the urgent need to preserve the environmental purity through managing the inflow of tourism, controlling the use of non-degradable wastes like plastics, better thrust on maintaining the cleanliness etc. In a more recent study by Manoj P K (2017) [21], "Segmentation Strategy for Promotion of Ecotourism Products: Evidence from Thenmala Ecotourism" in *South Asian Journal of Socio-Political Studies (SAJOSPS)*, as a continuation of his earlier studies the author has studied whether the socio-economic factors influence the decisions of the tourists and accordingly suggested the strategy for segmentation of the tourists visiting that location.

Though there are many studies on ecotourism (and its variants) done in the Indian context, including a few studies in the context of Kerala state, studies on 'Thommankuthu' ecotourism destination are virtually nil, in spite of its growing importance. So, this study focuses on Thommankuthu Ecotourism project, and its rural development potential.

RELEVANCE AND SIGNIFICANCE OF THE STUDY

The concept of inclusive growth is great relevance today, especially for the developing countries like India. This concept replaced the theoretical culmination of classical economists in the formulation of the developmental policy. Inclusive growth was the major concern of the Indian policy makers from the 11th Plan. Since then it is included in almost all the national policy frameworks. This idea stresses on the socio-economic inclusion of the backward class weaker sections and lower strata of the people by ensuring their active and productive participation in the development activities. The current development philosophy emphasizes the importance of participation and it is underpinned by ecotourism. Ecotourism ensures the local participation and sustainable local development according to the inclusive growth guidelines by taking less development efforts. Worldwide, the vast development potential of tourism is well recognized, particularly that of sustainable tourism models like ecotourism. Ecotourism helps to bring about faster economic development and that too in an 'Inclusive' (balanced and equitable) manner. Studies on ecotourism are rare in the context of Kerala; particularly with reference to destinations like Thommankuthu. So, Thommankuthu is the area chosen for this study, it being a sufficiently populated locality with the local community in involved in tourism; who are all rural people, with a substantial share of tribal communities.

OBJECTIVES

1. To study the potential of ecotourism to promote the economic development of the rural people with reference to Thommankuthu Ecotourism Project in Idukky District, Kerala.

2. To study the socio-economic status of the rural people associated with Thommankuthu Ecotourism Project and changes thereof, if any, because of the ecotourism initiatives.

3. To assess the impact of Thommankuthu Ecotourism Project on the rural labour market.

METHODOLOGY

The study is designed as a descriptive-analytical one as it seeks to shed light on the inclusive economic development by way of ecotourism with reference to Thommankuthu Ecotourism Project in Idukky District of Kerala. The required data are collected from both primary and secondary sources. The primary data are obtained from a sample of 100 households using a well-designed, pre-tested Questionnaire. Secondary data are collected from research journals, reports, books and Government publications and so on. For data analysis and interpretation, popular statistical tools are used. For this study, the universe is the rural households settled near the Thommankuth Ecotourism Project. As their population is not exactly known, Snowball Sampling is used for data collection from these rural 100 households in that area.

THOMMANKUTHU ECOTOURISM PROJECT

Thummankuthu got this name after Thomban, a tribal leader. The natural scenery of waterfalls and the pristine surroundings attract hordes of tourists. Majority of these tourists come from the nearby towns and cities especially from Kochi. Thommankuthu Ecotourism Project was opened for visitors on 27.11.2005. This Ecotourism Project is a day-tourism destination operated by the Thommankuthu Vana Samrakshana Samithy (VSS) under the aegis of the Forest Department, Government of Kerala. Thommankuthu is located in Idukki district. The place is merely 20 km from Thodupuzha, KSRTC Bus Station, 74 km from Kochi, and 70 km away from Aluva Railway Station. It is a land of caves and waterfalls. It comprises of about 85.5 Hector forest area under the control of the Forest Department and Thommankuthu VSS. In 2005 Thommankuth Ecotourism Project was officially registered under the Forest Department. It is in the 13th position among the ecotourism projects in Kerala. Thommankuthu is a series of 12 waterfalls spread over a distance of 5 km in the river 'Kannadi' in Thodupuzha Reserve Forest, which is in the jurisdiction of the Kaliyar Range in Kothamangalam Division. The falls in seven steps are surrounded by a number of mysterious caves. At each step, there is a cascade and a pool beneath, because of these reasons it is also known as 'Ezhunilakuthu'. The seven-step falls are surrounded by a number of mysterious stories. A popular one is that Thommankuthu is named after Thomban, a tribal leader who was washed away near the waterfall while crossing the river. The distance between the first and the seventh fall is about 500 m. People migrated to Thommankuthu only after the 1950s. They exploited the forest resources very intensively and engaged in sand mining from the river 'Kannadi' for their livelihood. So, the rate of deforestation was very high at that time. Due to these reasons and lack of basic infrastructure, the place witnessed continuous reduction in the number of tourists. Almost all these problems were solved after the formation of VSS – an organization of local people officially registered under the Forest Department in 2003. The members consist of 170 families, living around the 2 km of the spot. The main aim of VSS is to protect forest and forest resources. It conducts General Body meeting in each year to elect the members for the Executive Committee (EC), the committee consists 9 members including the President, Secretary and other executive members. The Secretary of the VSS is nominated and appointed by the Forest

Department and must be an official of the Forest Department itself. Other members are elected in the General Body. The Forest department recommends that at least 3 members in the EC be women.

The EC holds its meetings every month for studying the performance and deciding on new ideas for improving the quality of the ecotourism project. There are 40 Guides appointed by the VSS for facilitating necessary services for tourists. Besides, 20 workers are appointed for constructing fire belt to prevent forest fire, build structures for the comfort and entertainment of tourists and for afforestation activities. All of these appointments were done from members of VSS for ensuring the local participation. The activities of VSS help to increase we-feeling among local people and change their exploiting attitude towards forest and forest resources.

ANALYSIS AND DISCUSSION

As noted earlier, the primary data are collected from a sample of 100 households from the study area. The age profile of the respondents is given in Table I. It is noted that 37 percent of the respondents belong to the age group of 46 to 55 years while 34 percent of them belong to the group, 36 to 45 years. The rest, 29 percent of the respondents belong to the age group of 25 to 35 years. (Table I).

Table -I: Age Profile of the Respondents

Age	No. of respondents	Percentage
25 to 35	29	29
36 to 45	34	34
46 to55	37	37
Total	100	100

Source: Field Survey

Table II shows the distribution of respondents according to their sex. It may be noted that 62 percent of the respondents are males and 38 percent of the respondents are females

Table -II: Gender-wise Distribution of Respondents

Sex	No. of respondents	Percentage
Male	62	62
Female	38	38
Total	100	100

Source: Field Survey

Table -III: Educational Profile of the Respondents

Educational status.	No. of respondents	Percentage
Pre-matriculation	56	56
Matriculation	17	17
Post-matriculation	27	27
Total	100	100

Source: Field Survey

Table III shows the distribution of respondents according to their educational status. It is noted that 56 percent of them have only Pre-matriculation education while 27 percent of them have Post-Matriculation education and the rest 17 percent are have Matriculation only.

Table -IV: Distribution of respondents on the bases of membership in VSS

Membership	No. of respondents	Percentage
Members	92	92
Non members	8	8
total	100	100

Source: Field Survey

Table IV shows the distribution of respondents according to their membership. It is seen that 92 percent of the respondents are members and 8 percent of respondents are not.

Table -V: Distribution based on the Major Sources of Income

Source of income	No. of respondents	Percentage
Ecotourism	54	54
Self-employment	17	17
labor	23	23
Property	6	06
total	100	100

Source: Field Survey

Table V shows the distribution of respondents based on their major sources of income. It is seen that 54 percent of them earn their major income from ecotourism and the rest 46 percent of them depend on sources other than ecotourism.

Table -VI: Distribution based on the Average Monthly Income

Income (in Rs per Month)	No. of respondents	Percentage
1000 to 5000	86	86
5000 to 10000	11	11
More than 10000	03	03
Total	100	100

Source: Field Survey

Table VI shows the distribution of respondents based on their average monthly income. We can clearly understand that86 percent of the respondents earn 1000 to 2000 rupees per month and only14 percent of the respondents earn above Rs. 5000 per month.

Table -VII: Distribution based on the Seasonal Changes in the Income

Seasonal variations in income	No. of respondents	Percentage
Yes	42	42
No	58	58
Total	100	100

Source: Field Survey

Table VII shows the for 58 percent of the respondents, their incomes are not influenced by the seasonal fluctuations. The rest 42 percent of them have their incomes influenced by (varying with) the changes in seasons. The distribution of respondents based on their role in the family shows that 68 percent of respondents are the breadwinners of their families and remaining 32 percent of samples are supporters of the main stay of the family.

Table - VIII: Distribution of respondents based on their Previous Occupation

Particulars	No	Percentage
Agriculture and allied activities	42	42
Coolie	23	23
Unemployed	26	26
Others	9	9
Total	100	100

Source: Field Survey

Table VIII shows the distribution of respondents according to their previous occupation. It is noted that 42 percent of total samples are depending on agriculture and allied activities, 26 percent of respondents were unemployed and 23 percent are coolies and remaining 9 percent spread on other kinds of jobs.

DISTRIBUTION OF THE RESPONDENTS BASED ON THE NATURE OF EMPLOYMENT
Sixty respondents are the direct employees of the ecotourism project, appointed by VSS and they earn a fixed salary that is not influenced by the season or any other fluctuations. These are permanent employment opportunities. The rest 40 respondents are not official employees of this project. Their employments represent spill over effects and are subject to seasonality.

Table -IX: Distribution of Respondents based on the Programmes Participated

Programmes	No : of respondents
Training programmes	48
Awareness programmes	92
Not participated	08

Source: Field Survey

Table IX shows the distribution of respondents based on the programme participated by them. In fact, 92 respondents got awareness programmes from this project, 48 got training programmes and **8** respondents did not get any benefit from these programmes.

Table -X: Distribution of Respondents based on Saving Habits and Loans Availed.

Savings and Loans	Yes	No
Savings	86	14
Loans	63	37

Source: Field Survey

Table X gives the distribution of respondents according to their saving habit and loan. It can be seen from the table that 86 percent of the respondents have habit of saving and 63 percent of samples take loans.

Table -XI: Distribution of Respondents based on Avenues of their Savings

Avenues of Savings	No: of respondents
Bank deposits	36
Chit funds	50
NHGs	30
Post office	18
Others	25

Source: Field Survey

The above table shows the distribution of respondents according to their saving avenues. Majority of the respondents prefer multi modes of saving avenues. 50 samples prefer the chit funds . Post Office saving is the least interested saving avenues that is only 18.

Table -XII: Distribution of Respondents based on the Purposes of Loans Availed

Purpose of Loan	No: of respondents	Percentage
Agriculture	24	38.00
Self-employment	12	19.00
Construction and maintenance of house	16	25.50
Others	11	17.50
Total	63	100.00

Source: Field survey

Table XII shows the distribution of respondents according to the purpose of their loans. Around 57 percent of total respondents are taken loans for productive purposes and rest of them (43 percent) have availed the loans for unproductive or other purposes.

Table -XIII: Distribution based on Improvement in the Standard of Living Indices

Indices	Number of respondents
Income	87
Skill	48
Infrastructures	100
Others	27

Source: Field survey

Table XIII shows the distribution of respondents based on improvement in their standard of living due to the upgradation of above-mentioned indices through this project. All the 100 respondents have agreed that infrastructure facilities improved a lot, and so also their standard of living. Of them, 87 have admitted ecotourism positively influences their income. While 48 of them feel the need for upgrading their skills, 27 of them can cope with others.

Table -XIV: Tourist arrivals

Month	No. of tourists	Percentage
January	2858	6.07
February	2310	4.91
March	3104	6.60
April	3244	6.89
May	3267	6.94
June	6198	13.17

July	6609	14.05
August	4998	10.62
September	3789	8.05
October	3876	8.24
November	3300	7.01
December	3476	7.39
total	47029	100.00

Source: Official records of Thommankuthu VSS

Table XIV shows the number of tourist arrivals. As per the records, the number of tourist arrivals is increasing year by year. From the above table we can understand that, in the month of June and July are the season which is recorded the highest arrivals.

Table -XV: Grants Allotted to Thommankutthu Ecotourism Project

Particulars	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Govt. grant	59500	59500	59500	59500	59500
Forest Dept. grant	30000	21700	273250	140000	870000
Total	89500	81200	332750	199500	929500
Expenditure	40000	36700	288250	155000	885000
Balance	49500	44500	44500	44500	44500

Source: Official records of Thommankuthu VSS

Table XV shows that grants provided by various government departments and the Forest Department. Forest Department transferred grants in accordance with the rising needs of the spot. In the last financial year (2016), the project received a sum of Rs. 929500 as grant, from this grant they spent Rs. 885000 and remaining Rs. 44500 was deposited in the account of VSS. These grants used for the afforestation and other developmental activities in the ecotourism spot. The balance is usually used to meet the short term requirements like providing small financial assistances to the VSS members during the times of emergency.

SOURCES OF REVENUE FOR THOMMANKUTHU ECOTOURISM PROJECT

There are primarily two sources of revenue for Thommenkuthu ecotourism project. The first source is the fee collected from the tourists for visiting the project area and eco-shop. Often, Rs 20 is collected from each tourist as the entrance fee. In addition to the entrance fee, the VSS and the Forest Department raise revenue by running shops for selling the forest produce (honey, medicinal plants etc.) which in turn are collected by tribal people.

Table -XVI: Ongoing Projects at Thommankuthu Ecotourism Spot

Ongoing projects	Estimate (in Lakhs)
Toilets	06.26
Tree huts	03.74
Eco-gullies	02.50
Total	12.50

Source: Official records of Thommankuthu VSS

Table -XVII: Future Projects at Thommankuthu Ecotourism Spot

Future projects	Estimate (in Crore)
Cope walk	03.00
Parking area	02.50
Flooring the path	01.75
Night camping facilities	02.70
Total	09.32

Source: Official records of VSS

Thommankuthu ecotourism spot is still in its developing phase. The forest department and VSS take effort to furnishing the spot for attracting more tourists.Tables XVI and XVII show the ongoing and future projects at Thommankuthu ecotourism destination. (VSS estimates the projects to materialise in 7 years hence). Table XVI depicts the idea regarding the ongoing projects. At present, there are three active ongoing projects; they are Toilets, The Tree Huts and The Eco-gullies.As per the estimation 6.26 lakhs, 3.74 lakhs and 2.50 lakhs respectively for each work. Table XVII shows that Rs. 3 Cr. will be spent for the cope walk, Rs. 2.50 Cr. will be spent for constructing the parking area, Rs.1.75 cr. will be spent for flooring the path of the eco tourist spot and

2.7 Cr will be spent for setting night camping facilities. In short, there will be substantial increase in the infrastructure facilities at this ecotourism destination in the days to come, as a result of the above investments.

CHALLENGES OF THOMMANKUTHU ECOTOURISM PROJECT

The major challenges faced by the ecotourism project can be classified into two. They are, natural challenges and managerial challenges. Natural Challenges include the following three: (i) **Gambling of monsoon;** the main attraction of the Thommankuthu eco-tourism project is the water fall in Kannadi River. Like agriculture, the water falls in the spot depend on the monsoon; (ii) **Distance from other tourist spot;** Distance from other tourism spots is other problem faced by the ecotourism project; (iii) **Carrying capacity;** Carrying capacity is very less in Thommankuthu compared to the other eco tourist destinations in Kerala. Since the spot consists of only   waterfalls, many of the visitors are not ready to spend their leisure time with this single attraction. Managerial challenges include the managerial inefficiency in the form of lack of organized planning , shortage of trained officers and managers, less advertisements, lack of   parking and other infrastructural facilities, and so on.

IMPACT OF THOMMANKUTHU ECOTOURISM PROJECT ON THE LOCAL LABOUR MARKET

As high as 54 percent of respondents agree that ecotourism is their major source of income. As high as 86 percent of respondents earn Rs. 1000 to Rs. 5000 as average monthly income. Almost all of them are more or less aware of their average monthly income. Income of 58 respondents are not influences by seasonal variations. VSS has reserved 50 percent direct employment for women and takes care of the interests of the women, and accordingly VSS promotes women empowerment. Significant number partly or fully unproductive labor forces have been transferred into productive and organized employment opportunities because of Thommankuthu ecotourism project. As high as 92 percent of the sample under study are beneficiaries of the awareness programmes while 48 percent got special training. This shows a transfer of human resource into human capital. Most of them are engaged in savings of their earnings in different avenues. Besides, majority of them have availed loans also for various productive purposes, like, income generating activities related to tourism.

SUMMARY OF MAJOR FINDINGS AND SUGGESTIONS

It is noted that as high as 92 percent of respondents are the members of VSS. So, it has high local participation. There is obvious positive impact on the local labour market because of this project as already noted earlier. Almost all the respondents have reported to have experienced improvement in their standard of living due to the increase in income, skills, infrastructure facilities etc. because of this project. Officials concerned are planning and implementing programmes for the development of this project. This project can attain better and faster development, by solving the managerial inefficiencies associated with it. The other major suggestions are as follows:

➢ Exploiting the opportunities of adventure tourism and night tourism in this major ecotourism destination;

➢ Keeping records in a more systematic manner so that more efficient monitoring of the project would be possible from time to time;

➢ Providing additional powers to VSS for better planning, monitoring and control of this project, and

➢ Using the potentials of the social media for advertising and more effectively promoting this tourism spot.

CONCLUDING REMARKS

It is widely accepted that the host population should receive economic benefits of ecotourism. Without the financial returns, they will have no incentive to positively look at the intrusion of tourists and will not have the interest to protect the environment upon which tourism depends. Ecotourism service is often provided in earmarked or designated protected areas or national parks which may have been imposed upon the indigenous population and if they can see no benefit from its existence, they may have little incentive to adhere to the environmental regulations of the common pool. So the local participation is the most important feature of ecotourism projects. The magnitude of the poverty of our country clearly shows that a major portion of the poor people living in village areas. Improvement in the standard of living is essential for realizing the concept of inclusive growth. It can be possible through the establishment of ecotourism projects, like Thommankuthu Ecotourism Project. This is a small ecotourism destination with limited carrying capacity. But, it provides a lot of productive employment opportunities to the locals. It brings infrastructural developments and enhances the overall development of the area. This ecotourism project is a role model for other underdeveloped villages which are blessed with natural beauty. This project can uplift the economy and the well-being of the local people without hurting their tradition, culture, and ecology.

ACKNOWLEDGEMENT

REFERENCES

(1)   Ajith Kumar M.K. (1998), "Psychographic & Demographic Profiles of Foreign Tourists Visiting Kerala with special reference to Spending Patterns", *Unpublished Ph.D. Thesis*, Cochin University of Science and Technology (CUSAT), Kochi, Kerala.

(2)   Ballabh, Aanandh (2005) *Fundamentals of Travel and Tourism*, Akansha Publishing House

(3)   Brundtland G.H. (1987), *The Brundtland Report, World Commission on Environment and Development*, Oxford University Press.

(4)   Bhatia, A.K. (1996), *Tourism Development: Principles and Practices*, Sterling Publishers Private Ltd., New Delhi – 110 020 (India).

(5)   Bijender K. Punia (1994) *Tourism Management – problem and prospects* pp169, Ashish Publishing House, New Delhi

(6)   Chatak, G.R. (2007), *Sustainable Tourism Codes and Guidelines*, Cyber-Tech Publications, Daryaganj, New Delhi, First Edition.

(7)   Clark, J.R. (Ed.) (1991), *Carrying Capacity: A Status Report on Marine and Coastal Parks and Reserves,* University of Miami/US National Park Service, Washington, DC.

(8)   Brandon, K. (1996). Ecotourism and Conservation: A Review of Key Issues. Washington, DC: The World Bank.

(9)   Government of Kerala, *Economic Review,* Kerala State Planning Board, Thiruvananthapuram, Kerala – for the years 2008 to 2016.

(10) Kabia, Sunil K. (2005), *Tourism and Environment*, Mohit Publications, New Delhi, First Edition.

(11) Kumar, Yathish (2007), "Tourism Sector and Sustainable Development", *Southern Economist,* Vol. 45, No. 9.

(12) Lane, B., "Sustainable Tourism, a new culture for the Interpreter", *Interpretation Journal*, Vol. 49, 1991.

(13) Lindberg, K., and J. Enriquez (1994), *An Analysis of Ecotourism's Contribution to Conservation and Development in   Belize*, Vol. 2. Washington: World Wildlife Fund.

(14) McNeeely, J.A., J. Thorsell., and H. Ceballos-Lascurain (1992), *Guidelines: Development of National Parks and Protected Areas for Tourism*, WTO/UNEP/IUCN, Madrid.

(15) Manoj P. K. (2008), "Sustainable Tourism in India: A Study from a Global Perspective with Focus on Tourism Prospects of Kerala", *Proceedings of Second International Conference on Responsible Tourism in Destinations*, 21-24 March, 2008, p.7. Also available online in the [Official website: http://www.artyforum.info/documents/MicrosoftWord-MANOJ-Poster.pdf]

(16) Manoj, P. K. (2009), "Environment Friendly Tourism for Sustainable Economic Development in India", *International Journal of Commerce and Business Management,* pp.139-147.

(17) Manoj P. K. (2010), "Tourism in Kerala: A Study of the Imperatives and Impediments with Focus on Ecotourism", *Saaransh RKG Journal of Management,* Vol. 1, No. 2, Jan. 2010, pp.78-82.

(18) Manoj P K (2015), "Prospects of Eco tourism in Kerala: Evidence from Kumarakam in Kottayam District" *International Journal of Research in Management and Social Science,* Vol. 3, Issue 1 (II), Jan. – March 2015, pp. 54-59.

(19) Manoj P. K (2015), "Employment Generation from Rural Tourism: A Field Study of the Local Community at Kumbalangi, Kerala", *International Journal of Applied Services Marketing Perspectives (IJASMP),* Vol. 4, No. 4, Oct.-Dec. 2015, pp.1880-1888.

(20) Manoj P K (2016), "Impact of Rural Tourism on the Environment and Society: Evidence from Kumbalangi in Kerala, India", *International Journal of Advance Research in Computer Science and Management Studies (IJARCSMS)*, Vol. 4, Issue 2, Feb. 2016, pp.148-159.

(21) Manoj P K (2017), "Segmentation Strategy for Promotion of Ecotourism Products: Evidence from Thenmala Ecotourism", *South Asian Journal of Socio-Political Studies (SAJOSPS)*, Vol.18, No.1, July-Dec. 2017, pp.112-119.

(22) Nigam, Satish C. (2006), *Ecotourism and Sustainable Development*, Rajat Publications, New Delhi, First Edition.

(23) Oommen, M. A., (2008), "Reforms and the Kerala Model", *Economic & Political Weekly*, Vol. XLIII, No.2, Jan. 12-18, 2008, pp. 22-25.

(24) Singh, Ratandeep (2008), *Tourism Marketing Principles, Policies and Strategies*, Kanishka Publishers & Distributors, Darya Ganj, Delhi – 110 002 (India).

(25) Singh, Sarvjeet (2009) *Ecotourism Development Management* A.K. Publications, New Delhi

(26) Sudheer, B. (2015), "Economic and Cultural Impact of Responsible Tourism Initiative in Kerala – A Case Study of Kumarakom Panchayath", *Research Report,* Research Sponsored by the University Grants Commission (UGC), New Delhi. (www.sncollegecherthala.in).

(27) ATREE (2006), *White Paper on Ecotourism Policy* (Draft), April, pp 4-5.

(28) World Economic Forum (2015), *The Travel & Tourism Competitiveness Report 2015,* CH-1223 Cologny, Geneva, Switzerland.

(29) United Nations World Tourism Organization (UNWTO) (2015), *UNWTO Tourism Highlights 2015 Edition*, Calle Capitán Haya, 42 28020 Madrid, Spain.

(30) Weaver, D.B. (2001), *Ecotourism,* John Wiley & Sons: Milton

(31) World Travel & Tourism Council (WTTC) (2015), *Economic Impact of Travel & Tourism 2015 Annual Update*, Harlequin Building, 65 Southwark Street, London, SE1 0HR, U.K.

(32) Govt. of Kerala (2014), *Kerala Tourism Statistics 2014*, Research & Statistics Division, Dept. of Tourism, Thiruvananthapuram.

(33) Govt. of India (2014), *India Tourism Statistics at a Glance 2014*, Dept. of Tourism, New Delhi.

(34) Official website of World Tourism Organisation (WTO), www.unwto.org

(35) Official website of World Travel and Tourism Council (WTTC), www.wttc.org

(36) Official website of Kerala Tourism (Government of Kerala), www.keralatourism.org

(37) Official website of Incredible India (Government of India).

E-WASTE MANAGEMENT IN INDIAN CITIES: A REVIEW

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ABSTRACT

The study aims to evaluate the present situation and identify major problems in managing e-waste in major Indian cities on the basis of published information. E-waste handling practices of major cities of India are identified and documented by reviewing existing literature, reports of various agencies and news articles to identify the initiatives in e-waste management. The paper reviews the status of e-waste management in major cities of India. Majority of e-waste is finding its way into the landfill. The study covers three metropolitan cities in India: Bangalore, New Delhi and Mumbai. There is a dire need to carry out more such studies to arrive at better options for managing e-waste.

Keywords: E-waste, E-waste disposal, E-waste management, India, Informal Recycling

INTRODUCTION

With the spectacular advances in Information Technology and the adaption of changing lifestyle, electronic devices have become an indispensable part of human life. Mobiles, television sets, laptops, washing machines, photocopiers and other electronic gadgets are rapidly becoming obsolete due to our thirst for new devices (Mundada et al., 2004). The quantity of e-waste being generated is growing at an alarming rate with the increase in production and consumption rates of electrical and electronic products (Needhidasan et al., 2014). E-waste is defined as *"a term used to cover items of all types of electrical and electronic equipment (EEE) and its parts that have been discarded by the owner as waste without the intention of re-use"(StEP, 2014)*. E-waste management is getting increasing interest not only from the government officials but also from the practitioners, researchers and public (Niu and Li, 2007). E-waste is packed with harmful metals and hazardous chemicals such as beryllium, cadmium, mercury, lead etc. that deteriorate the environment and also pose threat to human health (Pinto, 2008). The presence of valuable metals in e-waste like platinum, gold, beryllium, silver, gallium, and many others makes the recycling of e-waste a lucrative business. The precious metals and the materials like magnets, plastic, etc. extracted from e-waste can be further reused in the manufacture of electronic goods.

A study revealed that India generates about 18.5 lakh Metric Tonnes (MT) of e-waste annually with Mumbai leading the list of metro cities followed by Delhi and Bangalore on rank second and third respectively (Assocham-Frost & Sullivan Study, 2016). The table 1 below presents e-waste generated annually by top 8 Indian Cities.

Table -1: Top Indian cities generating e-waste

City	E-waste generated in a year (in metric tonnes)	Percentage (%)
Mumbai	1,20,000	22.81
Delhi (NCR)	98,000	18.63
Bangalore	92,000	17.49
Chennai	67,000	12.74
Kolkata	55,000	10.46
Ahmedabad	36,000	6.84
Hyderabad	32,000	6.08
Pune	26,000	4.94
Total	5,26,000	100

Source: Adapted from ASSOCHAM-Frost & Sullivan study, 2016

India is infamous for its participation in primitive e-waste management practices pertaining to improper handling, disposal and recycling of end-of-life electrical and electronic equipment. Only 3% of the total e-waste generated is handled by the authorized e-waste recycling facilities in the country and the remaining is routed to informal recycling yards in major Indian cities like Mumbai, Delhi, Bangalore and Hyderabad (Begum, 2013). Most of the businesses hand over their discarded electronic equipment to informal recyclers for quick money without realizing its perilous effects on the human health and environment.

In the present study, an attempt has been made to document existing practices of E-waste management and to identify improved practices based on E-waste collection, flow and recycling system in major cities of India.

OBJECTIVES OF THE STUDY

The study aims to examine the present scenario of E-waste management practices in India with special reference to the major E-waste generating cities of India. It attempts to highlight the major problems being faced by the existing e-waste management system on the basis of published information and suggest suitable measures for better management of the e- waste generated.

STUDY AREA & METHODOLOGY

The study area includes three metropolitan cities of India: Mumbai, Delhi and Bangalore. These cities are identified for the study considering the quantity of e-waste generated by them. The current practices regarding e-waste disposal, processing and handling of major cities of India are identified and documented by reviewing available publications, news articles, reports of various agencies etc. Reference list of included studies were also assessed. Broad search terms like e-waste in India or Electronic waste in India or e-waste Bangalore or e-waste Mumbai or e-waste Delhi etc. were used so that publications concerning selected cities were not overlooked. Some studies were excluded owing to not meeting the objectives of the study.

E-WASTE MANAGEMENT: A CASE OF MUMBAI

Mumbai is the largest generator of e-waste in India, followed by Delhi and Bangalore. The city is estimated to generate 1,20,000 tonnes of e-waste annually (Assocham-Frost & Sullivan Study, 2016). MMR (Mumbai Metropolitan Region) acts as a hub for supply of e-waste to Delhi and other parts of India. Citizens, corporate and government houses sell their e-waste to the local scrap dealers for a good. Illegal scrap dealers employ open burning to recover copper from computer wires and chemically stripping of gold-plated components. Workers in scrap shops at Saki Naka or Dharavi dismantle keyboards, computers to remove chips from circuit boards. Studies reveal that easy and common method of e-waste disposal in Mumbai is throwing away e-waste in municipal dustbin which finds its way into landfills (Toxics Link, 2007).

The table 2 below presents a comparative picture of recycling processes adopted in Delhi and Mumbai, the 2 major E-waste producing cities of India.

Table -2: Recycling Processes in Delhi and Mumbai

Processes	Delhi	Mumbai
Extraction of Integrated Chips from PWB	Yes	Yes (Reselling and reuse in local market)
Extraction of components by Surface Heating of PWB	Yes	Yes (Reselling and reuse in local market)
Extraction of components by Disassembling of Monitor	Yes	Yes (In local market)
Yoke core and Copper	Yes	Yes (Reselling and reuse in local market)
Metallic core of Transformer and Copper	Yes	Yes (Reselling and reuse in local market)
Rare Earth Core of Transformer and Copper	Yes	Yes (Reselling and reuse in local market)
Rare Earth Core of Static Transformer	Yes	Yes (Reselling and reuse in local market)
Wire PVC and Copper (manual stripping)	Yes	Yes (Reselling and reuse in local market)
Plastic Shredder	Yes	Yes (In local market)
Dismantling of Refrigerator and segregation of Compressor, Cooling box	Yes	Yes (Reselling in local market)
Acid Bath for PWB	Yes	No (Sent to Delhi market)
Regunning CRT	Yes	No (Sent to Delhi market)
Glass Recovery from CRT	Yes	Yes (In local market)
Gold Extraction from Pins and Comb	Yes	No (Sent to Delhi market)

Source: Adapted from GTZ-ASEM, 2007

There are sizable number of workers engaged in informal recycling activities where they tear apart different components from e-waste using bare hands and without wearing any safety gear. They are vulnerable to the hazards associated with processing of e-waste (Needhidasan et al., 2014). The table 3 below shows various risks associated with E-waste processing.

Table -3: Potential occupational and environmental hazards associated with processing of E-waste

Computer / E-Waste Components	Process	Potential Occupational Hazard	Potential Environmental Hazard
Cathode ray tubes (CRTs)	Breaking, removal of copper yoke and dumping	Silicosis, Cuts from CRT glass in case of implosion, Inhalation or contact with phosphor containing cadmium or other metals.	Lead, Barium and other heavy metals leaching into groundwater, release of toxic phosphor.

Printed circuit boards (PCB)	De-soldering and removing computer chips	Tin and lead inhalation, Possible brominated dioxin, beryllium, cadmium, mercury inhalation.	Air emission of same substances.
Dismantled printed circuit board processing	Open burning of waste boards that have had chips removed to remove final metals	Toxicity to workers and nearby residents from tin, lead, brominated dioxin, beryllium, cadmium and mercury inhalation, Respiratory irritation.	Tin and lead contamination of immediate environment including surface and ground waters. Brominated dioxins beryllium, cadmium and mercury emissions.
Chips and other gold plated components	Chemical stripping using nitric and hydrochloric acid along riverbanks	Acid contact with e yes, skin may result in permanent injury. Inhalation of mists and fumes of acids, chlorine and sulphur dioxide gases can cause respiratory irritation to severe effects including pulmonary edema, circulatory failure and death.	Hydrocarbons, heavy metals, brominated substances, etc., discharged directly into river and banks. Acidifies the river destroying fish and flora.
Plastics from computer and peripherals e.g. printers keyboards, etc.	Shredding and low temperature melting to be reutilized in poor grade plastics	Probable hydrocarbon, brominated dioxin and heavy metal exposure.	Emissions of brominated dioxins and heavy metals and hydrocarbons.
Computer wires	Open burning to recover copper	Brominated and chlorinated dioxin, polycyclic aromatic hydrocarbons (PAH) (carcinogenic) exposure to workers living in the burning works area.	Hydrocarbon ashes including PAHs discharged to air, water and soil.
Miscellaneous computer parts encased in rubber or plastic e.g. steel rollers	Open burning to recover steel and other metals	Hydrocarbon including PAHs and potential dioxin exposure.	Hydrocarbon ashes including PAHs discharged to air, water and soil.
Toner cartridges	Use of paintbrushes to recover toner without any protection	Respiratory tract irritation, Carbon black possible human carcinogen, Cyan, yellow and magenta toners unknown toxicity.	Cyan, Yellow and magenta toners unknown toxicity.
Secondary steel or copper and precious metal smelting	Furnace recovers steel or copper from waste including organics	Exposure to dioxins and heavy metals.	Emission of dioxins and heavy metals.

Source: Adapted from Boralkar, 2005

E-WASTE MANAGEMENT: A CASE OF DELHI

Delhi is one of the primary destinations for e-waste processing and disposal in India. The sources of e-waste in the city are MNCs, individual consumers, public and private enterprises, manufacturing defects and imports (GTZ-ASEM, 2007). Around 70% of the total e-waste is imported from developed countries and mostly managed by the informal sector (Secretariat, 2011).

Mandoli industrial area is the hot spot for informal e-waste recycling. The valuable metals are extracted from CRTs, printed circuit boards, batteries and cables following rudimentary processes which includes (1) manual dismantling, separation and shredding of e-waste; (2) heat-extruding processing of scrap plastic; and (3) using acids to extract metals from e-waste (Sthiannopkao and Wong, 2013). The effluent containing heavy metals and their derivatives is discarded in nearby drains, arable land or water bodies (Pradhan, 2013).

High levels of hazardous chemicals like dioxins, furans are found in the recycling yards where primitive methods like open burning are used (Steiner, 2004). Chronic Exposure to these chemicals lead to a high risk of cancer. Approximately 25,000 workers of all genders are employed in scrap-yards which handle 10,000 to 20,000 tonnes of e-waste annually. Thousands of families in the city are thriving on this e-waste recycling business for years. In most cases all the family members i.e. elders, kids and women are engaged in backyard industries where they work in a hazardous environment without proper protective equipment (GTZ-ASEM, 2007). There is lack of awareness among general masses regarding the concept of e-waste. Most of the people (about 90 per cent) are ignorant of the e-waste recycling going on in their city. They sell their trash to local kabaadiwalas. They are unaware of the correct ways of disposing their e-waste and the consequences of improper disposal of electronic gadgets (Kwatra et al., 2014).

E-WASTE MANAGMENT: A CASE OF BANGALORE

Bangalore, the IT hub of India, has emerged as the third-largest electronic waste producer in India and over the years, the E-waste generated by it has increased at a very fast speed. Several estimates on the quantity of e-waste produced in Bangalore are available. According to PCB officials, about 13,000 tonnes of e-waste was produced in the year 2009 excluding household appliances. A year later, it was estimated that the annual generation of e-waste from Bangalore from all sectors was 6743.87 MT for computers, television and mobile phones (EPTRI, 2010). But now India's silicon city generates nearly 92000 MT of E-waste annually (Assocham-Frost & Sullivan Study, 2016). Information technology firms and electronic manufacturers are among the major producers of e-waste in the city. Around 30% of all equipment in IT sector end up as e-waste every year (Jatindra and Sudhir, 2009). Approximately 300 tonnes of lead, 1000 tonnes of plastics, 0.23 tonnes of mercury, 350 tonnes of copper and 43 tonnes of nickel are produced annually in the city (Needhidasan et al., 2014).

E-waste recycling involving both licensed and a few unlicensed operations are operative in the city. About 70 per cent of e-waste is processed and handled by the unorganized sector. Scrap dealers who are specialized in certain processes involved in recycling congregate in specific areas of the city. Recyclers in Tilak Nagar and Nayandahalli specialize in processing plastic waste and e-waste scrap dealers in Gowripalya are involved in extraction. Women and children are also engaged in processing e-waste. Few are hired on monthly basis with salary varying from Rs 5,000-6000 and others are paid on daily basis at Rs 100 to Rs 120 for men and Rs 75 to Rs 90 for women. The e-waste recyclers send the dismantled e-waste every alternate day to Mumbai and Delhi and earn around Rs 2-3 lakhs per month (Manasi, 2013). At the e-waste recycling areas, environmental contamination and potential human health hazards is a cause of concern. Majority of the residents have no clue about the magnitude of E-waste problem. The public and private sector prefer to auction the e-waste to informal dismantlers to get good price for it (Jatindra and Sudhir, 2009). The formal recycling units are unfortunately underutilized. The major formal e-waste recyclers are Ash recyclers and E-Parisaraa. E-Parisaraa Pvt. Ltd., India's first electronic waste recycler, has the capacity of handling and recycling upto 3 tonnes of e-waste per day but it is getting only 1 tonne (E-Parisaraa, 2010).

SCOPE FOR FUTURE WORK

The research has been conducted in three metropolitan cities in India: Delhi, Mumbai and Bangalore. These cities generate the highest e-waste among major metro Indian cities (Assocham-Frost & Sullivan Study, 2016). This could be extended to include the rest of the country which is equally responsible for this growing problem. There is a dire need to carry out more such studies to arrive at better options for managing e-waste.

CONCLUDING REMARKS

It is an undeniable fact that e-waste is becoming a serious matter of concern in India. The E-waste treatment and processing options practiced in Indian cities are very outdated and hazardous to human health and environment. There is a dire need to raise awareness of e-waste issues and encourage consumers to return their outdated electronic devices for collection and reuse. Proper segregation of the waste at source would lead to better options for scientific disposal of waste. The awareness level of masses should be increased using various tools like advertisements, etc. and e-waste issues should also be included in school and college curriculum to sensitize students about it. Incentives should also be provided to producers to encourage them to design products that contain fewer toxic components that are easy to recycle, disassemble and reuse. State-of-the-art infrastructure and more recycling facilities are also required to handle e-waste effectively in India. From the study of Indian cities, it can be concluded that E-waste management is still in the nascent stages. There is a long way to go in terms of achieving a sound E-waste management system in India.

REFERENCES

1. ASSOCHAM-Frost & Sullivan Study, (2016), India to sit on e-waste pile of 30 lakhs MT with Mumbai on top of heap: ASSOCHAM-Frost & Sullivan study. Retrieved from: http://www.assocham.org/newsdetail.php?id=5642

2. Begum, K. J. (2013), Electronic Waste (e-waste) Management in India: A review, IOSR Journal of Humanities and Social Science (IOSR-JHSS), 10(4), 46-57.

3. Bhaskar, K. & Turaga, R. M. R. (2017), India's E-Waste Rules and Their Impact on E-Waste Management Practices: A Case Study, Journal of Industrial Ecology, 1-13.

4. Boralkar, D.B. (2005), Perspectives of Electronic Waste Management. Retrieved from: http://mpcb.gov.in/images/pdf/e_waste_pres.pdf

5. E-Parisaraa, (2010), Electronic Waste Management by E-Parisaraa Pvt Ltd. Retrieved from: http://www.mait.com/assets/e-waste_management_by_e-parisaraa.pdf

6. EPTRI, (2010), Report on Inventorization of E-waste in Two Cities in Andhra Pradesh and Karnataka (Hyderabad And Bangalore). Retrieved from: http://www.indiaenvironmentportal.org.in/files/Chemical-e-waste_in_two_cities_in_andhra _pradesh_and_karnataka_.pdf

7. GTZ-ASEM, (2007), e-Waste Assessment in India: Specific Focus on Delhi. Retrieved from:http://www.nswai.com/nswaiadmin/Pdfs/insertPdf/i_2015/i_Nov15/e-Waste%20Assessment%20in%20India%20-%20Specific%20Focus%20on%20Delhi.pdf

8. Jatindra, P K & Sudhir, K. (2009), E-Waste Management: A Case Study of Bangalore, India, Research Journal Environmental and Earth Sciences, 1(2), 111-115.

9. Kwatra, S., Pandey, S., & Sharma, S. (2014), Understanding Public Knowledge and Awareness on E-waste in an Urban Setting in India: A case study for Delhi, Management of Environmental Quality: An International Journal, 25(6), 752-765.

10. Manasi, S. (2013), Emerging Trends in E-Waste Management: Status and Issues: a Case Study of Bangalore City, Working paper (Institute for Social and Economic Change). Retrieved from http://www.isec.ac.in/WP%20297%20-%20S%20Manasi.pdf

11. Mundada, M. N., Kumar, S., & Shekdar, A. V. (2004), E-waste: A New Challenge for Waste Management in India, International Journal of Environmental Studies, 61(3), 265-279.

12. Needhidasan, S., Samuel, M., & Chidambaram, R. (2014), Electronic waste–an Emerging Threat to the Environment of Urban India, Journal of Environmental Health Science and Engineering, 12(1), 36.

13. Niu, X., & Li, Y. (2007), Treatment of Waste Printed Wire Boards in Electronic Waste for Safe Disposal, Journal of Hazardous Materials, 145(3), 410-416.

14. Pinto, V. N. (2008), E-waste Hazard: The Impending Challenge, Indian Journal of Occupational and Environmental Medicine, 12(2), 65–70.

15. Pradhan, T. (2013), E-Waste Generation and Management in India, Recent Research in Science and Technology, 5(5).

16. Secretariat, R. S. (2011), E-waste in India. New Delhi, India Research Unit (Larrdis): Rajya Sabha Secretariat.

17. Solving the E-Waste Problem (Step) White Paper. (2014), One Global Definition of E-waste. Retrieved from http://www.step-initiative.org/files/step/_documents/StEP_WP _ One %20Global%20Definition% 20of%20E-waste_20140603_amended.pdf

18. Steiner, S. (2004), Risk Assessment of E-waste Burning in Delhi, India, Diploma Thesis.

19. Sthiannopkao, S., & Wong, M. H. (2013), Handling E-waste in Developed and Developing Countries: Initiatives, Practices, and Consequences, Science of the Total Environment, 463, 1147-1153.

20. Toxics Link. (2007), Mumbai: Choking on E-waste, Retrieved from: http://toxicslink.org/docs/Mumbai-Choking-E-waste_report_mail.pdf

21. Toxics Link. (2016), What India Knows about E-waste: Report on Awareness Levels of E-waste amongst common citizens in India. Retrieved from: http://toxicslink.org/docs/What-India-knows-about-e-waste.pdf

LIVELIHOOD DIVERSIFICATION IN NAGALAND

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ABSTRACT

Livelihood diversification refers to the attempts made by individual and households to add new portfolios in their income earning activities in order to sustain their livelihood or raise their living standard. Livelihood diversification can take place for both agricultural and non-agricultural activities. A recent studies show that, livelihood diversification is an important tool for reducing poverty and alleviating people's living standard. This article tries to examine the livelihood diversification that exist in the state by taking farm, off-farm and non-farm activities of the people. The findings shows that majority (31.11 percent) of the households are still engaged in one activity for their livelihood. It also shows that 52.11 percent of the households are in low income diversity group. The article concludes with suggestion for removal of constraints and expansions of opportunities for households to earn more income for livelihood.

Keywords: Livelihood diversification, Income diversification, Rural and Urban.

1) INTRODUCTION

The term 'diversification' refers to the processes taking place at different levels of the economy, which are usually, but not always directly linked (Start, 2001). Livelihood diversification includes both on and off farm activities which are undertaken to generate income additional to that from the main household agricultural activities, via the production of other agricultural and non-agricultural goods and services, the sale of waged labour, or self-employment in small firms, and other strategies undertaken to spread risk; included in this are what has been termed 'activity or environment diversification' in agriculture (Carter 1997), or more radical migratory strategies (Stark and Levhari, 1982). Livelihood diversification is an active social process of individual or household involving the maintenance and continuous adaptation of a highly-diverse portfolio of activities over time in order to secure survival and improve standard of living (Ellis, 2000). Diversification activities make greater contribution to generate cash income for poorer household and it is a key strategy by which people try to make ends meet and improve their well- being. Thus, Livelihood diversity is the process by which households construct a diverse portfolio of activities and social capabilities for survival and in order to improve their standard of living.

In a developing country like India, land-based livelihoods of small and marginal farmers are increasingly becoming unsustainable, since their land is no longer able to meet the requirements of food for the family and of fodder for their cattle (Hiremath 2007). Due to this poverty rate in the country is poverty still 29.5 percent as on 2011-12 (planning commission 2014). Thus, People are engaged in different activities to earn enough income for their livelihood. Livelihood diversification can take place in both agricultural activities, i.e., production of multiple crops or high-value crops; and non-agricultural activities, i.e.,undertaking small enterprises, or choosing non-agricultural sources of livelihood like casual labour or migration (Khatun and Roy 2012). The different categories of activities where people are engaged to earn their Livelihood are farm, off-farm, and non-farm income sources (Saith, 1992). Farm activities include crop, livestock, horticulture and poultry. Off-farm activities are wage labourer which include; Food for work, agricultural labour, porter, sand collection, state Farm labourer; forest product includes works at charcoal, wood, grass, lumber; fishing like fish catching, repairing nets and equipment, transporting fish. Non-farm activities include formally employed; like teacher, health worker, vetenary surgeon, maid, guard, defence service, etc; trade like Grocery, stock business, middleman, contractor, fertiliser-pesticide dealer, livestock, cattle feed, garments, electrical, tea, grain, etc; service provision like worker as cobbler, barber, traditional medicine, tailor, money lender, fortune teller, etc; rental Animals, tools, tractor, bike, tents, land, warm clothes; and handicraft like Potters, blacksmith, tannery carpentry, spinning, basket making, roof thatching, mat making, carpet making, bamboo work, weaving, tannery, rattan furniture, wood sculptor, goldsmith etc, (Saha and Bahal, 2014). Thus, using these variables a study was made to highlight the diversity of employment and income that existed among the different household of the state.

2) OBJECTIVES

The objective of the study is to find:

1) The diverse source of employment and income.

2) The extent of income diversity.

3) METHODOLOGY

The study is based on the primary data collected from five districts of Nagaland, viz, Kohima, Longleng, Mokokchung, Dimapur and Phek 2017. From five districts a total of twelve (12) wards and villages were covered; six (6) wards/colony from the urban areas and six (6) villages from rural areas were covered. From each wards/villages fifteen (15) households were interviewed. Thus, a total of one hundred eighty (180) households were taken as a sample for the study. The collected data were analyzed using simpson Index to measure the extent of diversity among the study area. Simpson's Diversity Index is a measure of diversity which takes into account the number of employment/income sources as well as the relative abundance of each sources of income/employment. The formula for getting Simpson diversity index used in the study is as follows;

$$D = 1 - \left(\frac{\Sigma\ n(n-1)}{N(N-1)} \right)$$

n = the total number of Income/Employment of a particular household/area.

N = the total number of Income/Employment of all area.

The value of **D** ranges between 0 and 1. With this index, 1 represents infinite diversity and 0, no diversity (Stephanie 2017). The higher the number of income sources as well as more evenly distributed the income shares, the higher the value of D. The Simpson Index of Diversity is affected both by the number of income sources as well as by the distribution of income between the different sources (Saha and Bahal 2014).

4) RESULTS AND DISCUSSION

Extent of Livelihood diversification

It is seen from the table 1 that 49.45 percent of the diversifier households in Nagaland earn their livelihood from two and three sources. However, majority of the households (31.11 percent) derive their income from a single source. Those household engaged in four and five activities accounts for 15 percent. It is seen that only .56 percent of the total household has 6 sources of income, while another 1.11 percent of the total households are not engaged in any activities. For rural Nagaland, 2.22 percent of the households are not engaged in any activity while 3.33 percent of the households earn their livelihood from five different sources. But majority (55.55 percent) of the household earn their livelihood from two and three sources; 32.22 percent from two sources and 23.33 percent from three sources. Those households engaged in four and five activities accounts for 18.89 percent of the household. However, still a large number (25.56 percent) of the rural household are engaged in only one activity to earn their livelihood. The urban scenario shows that no household are without any activity. Like rural areas, 43.33 percent of the household diversifier are engaged two and three activities for their livelihood. However, those households engaged in one activity accounts for 38.89 percent which is the single largest percentage. It means majority of the household depend their livelihood on one activity. It was also found that those households who are engaged in more than four activities accounts for 12.22 percent only. Thus it is seen that majority of the household diversifier are having two and three sources of income.

Table -1: Diversified household (%)

Urban/Rural	Activity (Source of Income)						
	0	1	2	3	4	5	6
Overall	1.11	31.11	26.67	22.78	11.67	3.33	.56
Rural	2.22	25.56	32.22	23.33	15.56	3.33	
Urban		38.89	21.11	22.22	7.78	3.33	1.11

Sources: Field survey 2016-17

Among the different activities and sources of income, it is shown in figure 1 that formally employed contributes 58.55 percent of the total households income and 35.9 percent of employment among the households. This was followed by trade contributing 18.48 percent of income and 19.09 percent of employment. Livestocks contributes 8.42 percent of the total households income and 10.8 percent of employment among the household. Rent contribute 6.98 percent of the total households income and 5.53 percent of employment among the household. Thus, it is seen that the four activities, viz, formally employed, trade, rent and livestock, contributes 92.43 percent of the total households income and 71.32 percent of employment among the household. It was also found that crops, horti, poultry, fishing, service provision, handicraft, forest products and wage labour do not constitute the main source of livelihood for the people. This is supported by the fact that only 7.57 percent of their income comes from these activities even though people's engagement in this activity is high (28.68 percent of the households are engaged in these activities).
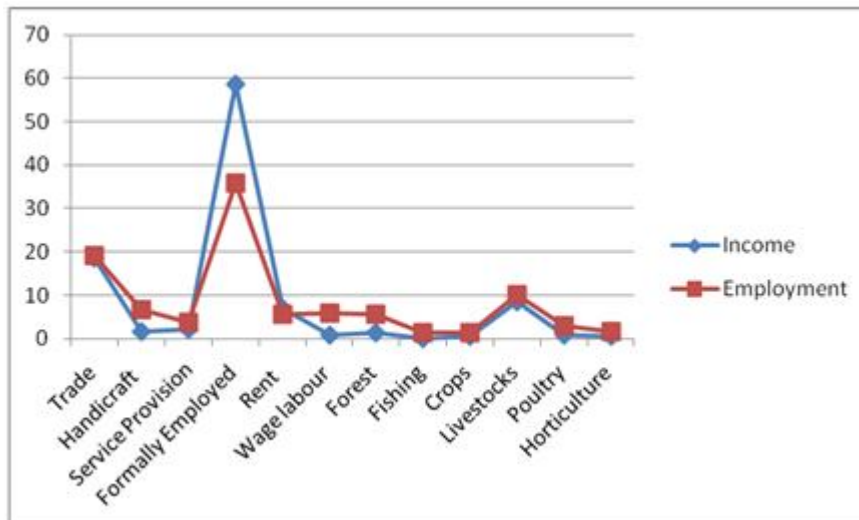
Figure -1: Sources of income and employment

INCOME DIVERSIFICATION

The average income diversification estimated using simpson index of diversity for the state comes out to be .61. The rural income diverisification is .623 which is higher than the average and urban diversification of .6. This shows that income from different activities is more evenly distributed among the households of rural area than urban areas. Among the study area, it was found that Lazumi Village under Phek district has the highest income diversity with .78 and Arkong ward under Mokokchung district has the lowest income diversity with .132. The figure in table no 2 shows that, 52.78 percent of the household in the study area have low income diversification. In other words, the sources of income from different activities for majority of the households are uneven. It is also seen that 38.33 percent of the households are in medium income diversification. It was also found that those household that are in high diversification category accounts for 8.89 percent. For rural areas, majority (45.56 percent) of the households have low income diversity. Medium income diversity accounts for 42.22 percent of the households. However, only 12.22 percent of the household has high diversity. For urban areas, majority (60 percent) of the households have low income diversity. Medium income diversity accounts for 34.44 percent of the households. However, only 5.56 percent of the household has high diversity. Thus it can be seen that diversity in rural areas are higher than that of the urban areas.

Table -2: Distribution of diversification index among diversifier household

Diversification Index		Overall	Rural	Urban
Low	< .38	52.78	45.56	60
Medium	.38 - .63	38.33	42.22	34.44
High	> .63	8.89	12.22	5.56

Sources: Field survey 2016-17.

RURAL INCOME DIVERSIFICATION

Diversifications in rural areas are found to be more since they cannot depend on crops alone for survival. Thus, they engaged in forest products, as wage labourer, fishing, artisans etc, to earn more income for their livelihood. Among the rural areas Lazumi village has the highest diversity index of .78 followed by Nyang, Longkum, Dz, and Kohima with a diversity index of .71, .538, .47 and .44 respectively. The lowest diversified village is Ungma with a diversity index of .29. The percentage households of each village that are in low, medium and high diversity category are shown in table no. 3. From the table it can be seen that Ungma with 86.67 percent has the highest percentage of household in low diversity category followed by Longkum and Kohima villages with 53.33 percent each and Dzulhumi with 46.67 percent. In these villages the number of household having low income diversity is very high. The lowest percentages of household in low income diversity index are shown by Lazumi and Nyang villages with 13.33 percent and 20 percent respectively. Among the villages with medium income diversity, Lazumi village has the highest percentage of household with 66.67 followed by Nyang, Longkum, Dzulhumi and Kohima with 60 percent, 46.67 percent, 33.33 percent respectively. The lowest percentage is exhibited by Ungma village with 13.33 percent. The percentage of household in high category are the highest in Dzulhumi, Lazumi and Nyang villages with 20 percent each followed by Kohima village with 13.34 percent. The two villages, viz, Longkum and Ungma, have zero percent of household in this category.

Table -3: Distribution of diversification index among diversifier household of rural areas

Diversification Index		Dzulhumi	Longkum	Lazumi	Nyang	Ungma	Kohima
Low	< .38	46.67	53.33	13.33	20	86.67	53.33
Medium	.38 - .63	33.33	46.67	66.67	60	13.33	33.33
High	> .63	20	0	20	20	0	13.34

Sources: Field survey 2016-17.

URBAN INCOME DIVERSIFICATION

Diversifications in urban areas are found to be lower than rural areas in general as those household who stays in urban areas are dependent on one or two activity that earn them high income. Among the urban areas Pfutsuro has the highest diversity index of .67 followed by Zakito, Kohima High School, Phom Peoples Conference, and Lingrijan with a diversity index of .62, .59, .56 and .26 respectively. The lowest diversified village is Arkong Ward with a diversity index of .135. The percentage households for each wards that are in low, medium and high diversity category are shown in table no. 4. From the table it can be seen that Arkong ward with 93.33 percent has the highest percentage of household in low diversity category followed by Zakito, High School ward Kohima High School and Lingrijan with 86.67 percent, 73.33 percent and 53.33 percent of the household respectively. The lowest percentages of household in low income diversity index are shown by pfutsero and Phom Peoples Conference with 26.67 percent each. Among the wards with medium income diversity, Pfutsero has the highest percentage of household with 66.67 followed by PPC, Lingrijan, and Kohima High School with 53.33 percent, 46.67 percent and 26.67 percent respectively. The lowest diversity is shown by Zakito and Arkong with 6.67 percent each. The percentage of household in high diversity category are shown by PPC with 20 percent followed by Pfutsero and Zakito with 6.66 percent each. The two wards, viz, Lingrijan, Arkong and KHS have zero percent diversity of household in this category.

Table -4: Distribution of diversification index among diversifier household of urban areas

Diversification Index		Lingrijan	Zakito	Pfutsero	Phom Peoples Conference	Arkong	Kohima High School
Low	< .38	53.33	86.67	26.67	26.67	93.33	73.33
Medium	.38 - .63	46.67	6.67	66.67	53.33	6.67	26.67
High	> .63	0	6.66	6.66	20	0	0

Sources: Field survey 2016-17.

5) CONCLUSION

From the above discussion it was seen that majority of the people in the state are still dependent on one activity for their livelihood and formal employment is their main source of employment and income. It was also found diversity in income is more in rural areas than urban areas. However, majority of the household both in rural and urban areas have low diversity index indicating that there is unevenness in the distribution of income sources as well low engagement among the household to different sources of income. Thus, it can be concluded that people sources of livelihood are limited. To improve or increase the livelihood sources, it is suggested that all weather road infrastructure in the state be developed. Due to lack of proper roads, people from the rural areas could not sell their agricultural and forest products and it limits their income earning sources. Thus, having better road infrastructure will automatically help in improving the marketability of agriculture goods for rural population and thereby enhance their livelihood sources. Secondly, proper education relating to marketing be imparted to the farmers through orientation and workshops. This will help in reduction in the waste of surplus agricultural goods and enhance their earning capacity. Moreover, proper electricity supply being a necessary determinants for setting up small scale and tiny industries should be provided to the people.

REFERENCES

- Carter, M. (1997): "Environment, Technology, and the Social Articulation of Risk in West African Agriculture", **Economic Development and Cultural Change**, Vol 45, No 3: 557-591.

- Ellis, F. (2000): "The Determinants of Rural Livelihood Diversification in Developing Countries", **Journal of Agricultural Economics**, Vol 51, No 2, 289-302.

- Hiremath, B.N. (2007): "The Changing Faces of Rural Livelihood in India", at **National Civil Society Conference** on "What it Takes to Eradicate Poverty", held at Institute of Rural Management, Anand, 4-6 December.

- Khatun D and Roy B C (2012): "Rural Livelihood Diversification in West Bengal; Determinants and Constraints". **Agricultural Economics Research Review**, Vol 25, No. 1. Pp 115-124.

- Saha B and Bahal R, (2014): "Livelihood Diversification Pattern Among the Farmers of West Bengal", **Economic Affairs**,, Vol 59, N0 3. Pp 321-334.

- Saith, A, (1992): "The Rural Non-Farm Economy: Processes and Policies", **International Labour Office**, World Employment Programme.

- Stark, O. and D. Levhari (1982): "On Migration and Risk in Less Developed Countries", **Economic Development and Cultural Change**, Vol 31. Pp 190-196.

- Stephanie (2017): "Simpson Diversity Index; Definition, Formula and Calculation". Accessed on 28/03/2018 from www.statisticshowto.com/simpson-diversity-index/.

- Planning Commission (2014): "Report of the Expert Group to Review the Methodology for Estimation of Poverty", **Government of India**, New Delhi.

MODELLING THE DETERMINANTS OF COGNITIVE, AFFECTIVE AND REFLECTIVE WISDOM USING DECISION TREE APPROACH

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ABSTRACT

This study has been designed to classify the variables affecting wisdom Cognitive, Affective and Reflective Wisdom using Decision Tree Approach in R software. Scope of the study is limited to teaching fraternity working in professional educational institutions in the national capital region of India. Extant literature highlighted key academic activities that impact wisdom largely. Decision tree modelling was subsequently deployed to classify them on the basis of their associations with the three categories of wisdom viz. cognitive, affective and reflective. The results will help academic institutions to develop their teaching – learning processes around these relationships to enhance wisdom dimensions of their faculty.

Keywords: Wisdom, cognitive, affective, reflective, 3D-WS

INTRODUCTION

Wisdom is an ancient philosophical concept, and yet, until recently, it has escaped the attention of psychologists of the modem era. Wisdom is a subject that has puzzled philosophers, intellectuals, and mystics throughout the ages. The definition of wisdom remains elusive and debatable. Even though wisdom has been used in a variety of contexts in the English language, its meaning often varies due to the context of its use. Thus, it is not surprising that psychologists have been slow to study this multifaceted concept. In the domains of educational and counselling psychology, wisdom had been historically ignored as a research topic. Educational psychology mostly focused upon topics such as childhood learning, psychometric or intelligence testing issues, learning of remedial skills in adult education, etc. In counselling psychology, early efforts focused upon treating psychopathology and on personality development. As psychologists were forging a new science at the turn of the 20th century, they distanced themselves from humanistic fields in order to establish psychology as a scientific discipline. Thus, early psychologists avoided philosophical concepts such as wisdom that did not build psychology into an empirical science. Wisdom would remain unexplored until the 1980's (Chandler, 1990). Even at the close of the 20th century, the word "wisdom" does not appear in a dictionary of psychological terms (Reber, 1995). Thus, for a long time, wisdom was considered outside the scope of psychological investigations.

LITERATURE REVIEW

Modern management does not refer to Wisdom Management as a separate topic; it is linked to Knowledge Management as an use. During the last twenty years, people who work to find information in behavioural science have shown renewed interest in the ancient concept of wisdom (Chinen, 1984; Clayton & Birren, 1980; Dittmann-Kohli & Baltes, 1990; Sternberg, 1990b), which has been in the past believed as the peak of human development (Baltes & Staudinger, 2000). Wisdom coordinates knowledge and judgments about the 'fundamental practical's of life' around such properties as: (1) success plans and goals involving the conduct and meaning of life; (2) limits of knowledge and uncertainties of the world; (3) excellence of judgment and opinions about what could or should be done about a situation; (4) knowledge with very unusual scope, depth, and balance; (5) search for a perfect synergy of mind and character; and (6) balancing the good or well-being of oneself and that of others (Baltes & Staudinger, 2000).

Wisdom has long been conceived as a virtue by philosophers and by admired leaders of diverse religions with divergent and overlapping ideas about virtues and values associated with wisdom (Ardelt, 2005b). Historically, issues of virtues and values have been avoided by psychologists, in part because the ideal aspirations of psychological science, articulated by broad consensus, direct psychologists to work towards understanding, describing, or predicting human behaviour and experience, reduction of human suffering, and promotion of the well–being of persons, while avoiding the prescription or promotion of any specific ideology or any set of values (APA, 2000).

Psychologists have been wary of the concept of wisdom for decades and remain wary about attempting to measure individual differences in the levels of wisdom as an attribute of persons (Bluck & Glück, 2005; see also Baltes & Kunzmann, 2004). However, in a fast changing and uncertain world where rapid scientific and technological strides are accompanied by equally strong waves of intolerance, breakdown of family and societal systems, and an increasing sense of frustration and inability to resolve inner conflicts, there is a need for a serious study and scientific exploration of the topic of wisdom. The psychological study of wisdom and its

measurement is infamously difficult (Sternberg, 1990, 2004a), but not so much that the efforts to study or measure wisdom should be abandoned.

Achenbaum and Orwoll (1991) define wisdom as intrapersonal, between people and transpersonal experiences in the dimensions of cognitive (thought), affect (feeling), and conation (behaviour). The cognitive dimension contains self-knowledge, understanding, and the recognition of the limits of knowledge and understanding. The affective dimension consists of self-development, deeply caring; understanding feelings and self-excellence, and the conative represents integrity, honesty, good human quality, maturity in relationships, and philosophical/spiritual promises. Based on this definition, males might have an advantage in the intrapersonal sphere and cognitive wisdom dimension, whereas females might excel in the interpersonal and affective aspects of wisdom (Orwoll & Achenbaum, 1993). Boys are often talked with people to explore the world and to become independent and able to depend on you (Blazina, 2001). Because of this, 'masculine' thinking could be described as self-contained desires to do things for you and not be like others that are seen as separation, lack of interest, mastery, and actions of accomplishing or completing something challenging (Sampson, 1977). On the other hand, Girls are encouraged to develop ability to get along well with others such as deeply caring, understanding feelings and the ability to care for others (Surrey, 1993). Therefore, men might find it easier than women to perceive reality in a goal, clear and sensible, and detached way, whereas women might be more very kind and understanding, caring, and mature in relationships than men.

DEFINITIONS OF WISDOM

References	Definitions
Webster (1961)	Faculty of making the best use of knowledge, experience, and understanding by exercising good judgement.
Clayton and Birren (1980)	An integration of cognitive, reflective, and affective dimensions.
McIntyre (1985)	Related to options and how to judge what we should do.
Ackoff (1989)	Process that makes use of knowledge in order to answer difficult questions while considering human factors like moral or ethical codes.
Staudinger and Baltes (1996)	An expert knowledge to handle difficult questions in life.
Beck (1999)	Partly acquired by means of everyday trial and error
Aubrey and Cohen (1999)	More than being cultured and well educated; it implies an ethical obligation to improve society and an attitude of caring
Baltes and Staudinger (2000)	A multifaceted and multidimensional concept and that the multiple facets and dimensions reinforce each other
Brown and Starkey (2000)	The key to obtaining competitive advantage from organizational learning and knowledge, and that wisdom is therefore a key strategic resource, but one that is missing as a construct in the knowledge-based theory of the firm.
Bierly et. al. (2000)	The ability to best use knowledge for establishing and achieving desired goals and learning about wisdom as the process of discerning judgments and action based on knowledge.
(Webster 2007)	A complex phenomenon of multiple constructs working together in a synergistic way.
Nonaka and Kyoko (2008)	Making (human) sense of Data, Information, and Knowledge and is composed of Values and Vision
Nonaka and Kyoto (2008)	More important than Technology

Table-1: Definitions

FACTORS AFFECTING WISDOM

Wisdom involves a maturity of character with important salience to sound reasoning and judgment, and that wisdom would be most likely to emerge in adulthood (Birren & Svensson, 2005). The high level of integration across emotional and cognitive processes is a core characteristic of developmental maturity in adulthood (Ardelt, 2003; Labouvie–Vief, 1990; Orwoll, 1989; Orwoll & Perlmutter, 1990), and essential for excellence in mature and effective 'use of knowledge in problem solving' (Birren & Svensson, 2005). Ardelt's theory (1994, 2003), and the studies of some other authors on the psychology of wisdom (e.g., Sternberg, 1990c, 1998, 2003) suggest that there are variations in the level of wisdom expressed by individuals depending on the interaction of their personal characteristics and the contextual features of the situations calling for wisdom.

Individuals who have reached the level of maturity are characterized as 'wise; broadly empathic; with a full sense of identity; able to reconcile inner conflicts and integrate paradoxes' (Manners & Durkin, 2001), and

humble (Gardner, 1999; Kitchener & Brenner, 1990; Scharffs, 1998). Wisdom–related maturity is assumed to have 'practical and transcendent' aspects or functions (Wink & Helson, 1997); therefore the qualities of wisdom enable wise persons to navigate life's common challenges with exceptional skill and to flourish even in the face of serious hardships (Ardelt, 1994, 1998, 2003, 2004a, 2004b, 2005; Wink & Helson, 1997; see also Wethington, 2003).

OVERVIEW OF THREE DIMENSIONAL WISDOM THEORY

The theoretical foundation for this study is a psychological view of wisdom, in which wisdom is defined as a high level of integration across certain affective, cognitive, and reflective dimensions of personality maturity ((Clayton and Birren, 1980); Ardelt, 2003). Monika Ardelt (2003) is one of the most recent scholars to make a substantial contribution to knowledge about the nature of wisdom and measurement of wisdom in individuals (Sternberg, 2004b; Bassett, 2006; Brugman, 2006). Ardelt emphasizes that the emergence of wisdom requires the integration of three distinct but inseparable domains i.e. cognitive, reflective and affective. The cognitive dimension of wisdom refers to a person's ability to understand life, that is, to understand the importance and deeper meaning of important pattern of things and events, especially relating to intrapersonal and interpersonal matters (Ardelt 2000b; Blanchard–Fields and Norris 1995; Chandler and Holliday 1990; Kekes 1983; Sternberg 1990a). The reflective dimension is a requirement for the development of the cognitive dimension of wisdom. A deeper understanding of life is only possible if one can perceive reality as it is without any major distortions. The affective dimension refers to the presence of positive feelings of love, hate, fear etc and behaviour toward other beings, such as feelings and acts of sympathy and kindness, and the absence of indifferent or negative emotions and behaviour toward others. The three dimensions are not independent of each other, but they are not conceptually identical either. (Ardelt, 2003).

Ardelt's model (2003) treats wisdom as a latent variable with cognitive, reflective, and affective as the effect indicators. Ardelt developed and tested the Three–Dimensional Wisdom Scale (3D–WS, 2003), a self–administered rating scale that assesses individual's levels of wisdom. In a population drawn from middle–aged and older members of the general population, Ardelt (2003) found this instrument to show reliability and validity as a measure of wisdom.
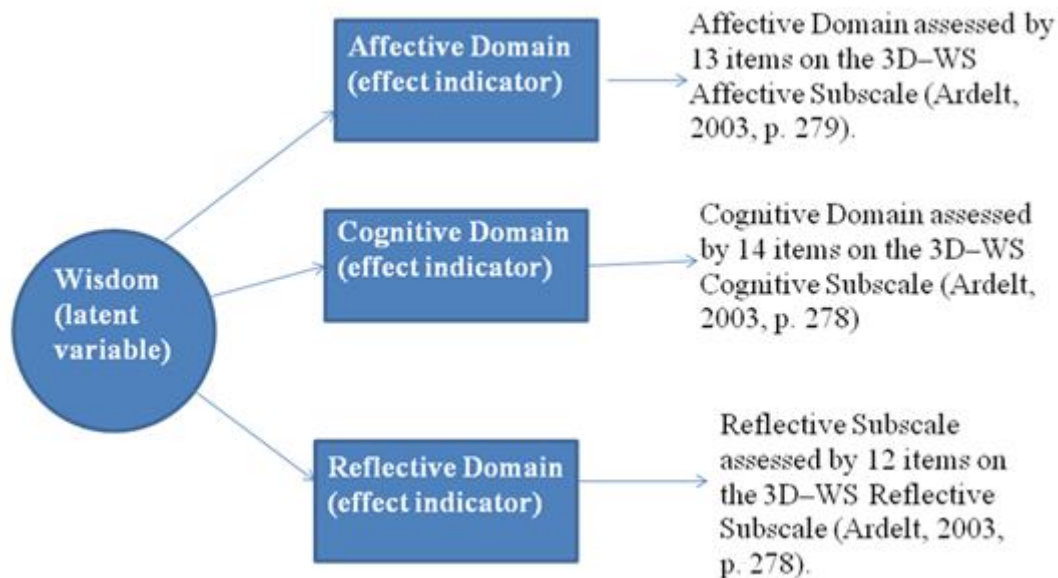
Fig-1: Representation of Ardelt's three–dimensional model of wisdom (2003)

CONCEPTUAL FRAMEWORK OF THE STUDY

This study incorporates the use of 'Three Dimensional–Wisdom Scale' (3D–WS, Ardelt, 2003) to measure wisdom as a latent variable. This instrument has three subscales; thus, there were four dependent variables: (a) score on the 3D–WS Affective Subscale (i.e., the mean of 13 items); (b) score on the 3D–WS Cognitive Subscale (i.e., the mean of 14 items); (c) score on the 3D–WS Reflective Subscale (i.e., the mean of 12 items); and (d) 3D–WS Combined Scale score (i.e., the mean of the three subscale scores). Ardelt's scoring instructions (2003) were used to calculate participants' scores on this instrument.

Interest for the concept of wisdom has traditionally been embedded to philosophy and theology, but in the last two decades it started grasping more place in the psychological literature. In psychology, focus is put mostly on defining wisdom and its components (e.g. Baltes & Staudinger, 1993; 2000; Ardelt, 2000; 2011; Baltes &

Smith, 2008; Yang, 2008), on ontogeny of wisdom (e.g. Baltes, Staudinger & Lindenberger, 1999; Narvaez, Gleason & Mitchell, 2010; Choi & Landeros, 2011), and on assessment of wisdom (e.g. Ardelt, 2003; Webster, 2003). Unlike philosophical or theological, wisdom as a psychological concept is strongly connected with the possibilities of its assessing in both, qualitative and quantitative approach.

A rich literature within education circles links teacher's sense of efficacy and collective responsibility to increase their wisdom level. Teaching requires practitioners to remain open, eager for, and dedicated to the pursuit of continuous growth. Educators seek to expand their repertoires, deepen their knowledge and skills, and become wiser in rendering judgments. They remain inventive in their teaching, recognizing the need to welcome new findings and extend their learning as professionals. Accomplished teachers also stay abreast of current research and, when appropriate, incorporate new findings into their practice. They take advantage of professional development opportunities such as conferences, workshops, digital learning experiences and FDPs. Educators therefore serve as paradigms of lifelong learning and achievement. Character and competence contribute equally to their educative manner. Such individuals possess the love of learning, tolerance, open mindedness and ultimately able to make wise decisions.

Individuals undertake a variety of projects to pursue the goals, participating actively in their learning communities to promote progress and achievement. They demonstrate new methodologies, interact with other social communities. They work with their colleagues as members of a team, sharing their knowledge and skills while contributing to the ongoing development themselves which ultimately increase their wisdom level.

RESEARCH METHODOLOGY
The study covers teaching fraternity working in professional educational institutions in Delhi and the national capital region (NCR) of India. Judgmental sampling was used for the purpose of data collection. In total 500 questionnaires were distributed. 433 completed questionnaires were used and the remaining questionnaires were discarded on account of missing data. Mean values of cognitive, reflective and affective wisdoms were calculated based on Ardelt's scale. These values were used to build decision tree models.

DATA ANALYSIS
Classification of variables affecting Average Cognitive Wisdom

VariableName	Description
AvgCog	Average Cognitive wisdom Value
fdp_a	Number of Faculty Development Programs attended
papers_p	Number of Papers Published
papers_pres	Number of Papers Presented
sem_org	Number of Seminars Organized
sem_atten	Number of Seminars Attended
work_atten	Number of Workshops attended
work_org	Number of Workshops Organized
books_pub	Number of Books Published
books_ed	Number of Books Edited
phd_guided	Number of PhD Scholars guided
training_atten	Number of special training program attended
No_ref_pro	Number of refresher programs

Table-2: Variables impacting Cognitive wisdom

AvgCog is the target variable and all the other objects (books_ed, books_pub, fdp_a, No_ref_pro, papers_p, papers_pres, phd_guided, sem_atten, sem_org, training_atten, work_atten, work_org) are masked from mydata. The data values of AvgCog are divided into 2 sets thus converting the numeric data into categorical data. All values of average cognitive wisdom exceeding 2.50 will be marked "Yes" and the rest "No". In R model we cannot use categorical variable, therefore we need to convert the data into factor to enable the decision tree to recognize AvgCog as a categorical variable. This is carried out using the Factor command.

High = ifelse(AvgCog > 2.50,"Yes", "No")

We set the seed so that when we run the decision tree next time, we could obtain the same predictions made by the existing model. Set.seed() function uses the same random numbers while it is sampling or while running any kind of decision tree model. The data was split into testing and training to figure out how the model is performing on the unknown data. Initially, we fitted the model on the training data and subsequently we

predicted for the test data set using the decision tree model in R. Fifty percent data was incorporated into the train data and the rest into test data set. The following set of R commands was used to execute the above tasks.

The plot (tree) command produced the following output.

Fig-2: Predicted Tree Plot

Thereafter, the tree was predicted using the predict function.

tree_pred<- predict(tree_model, testing_data, type="class")

We compared the means of the predicted data and testing data using the mean() function. This enabled us to obtain the classification error. The resulted mean value was 0.17.

mean(tree_pred !=testing_high)

0.1705069

We now pruned the tree using the following set of commands. Pruning decreases the size of the tree by removing pieces of the tree that provide little power to classify instances. Pruning improved the predictive accuracy by reducing overfitting. To check the predictive ability of the revised model mean() function was deployed.

Plotting the cross validation error yields the following chart.
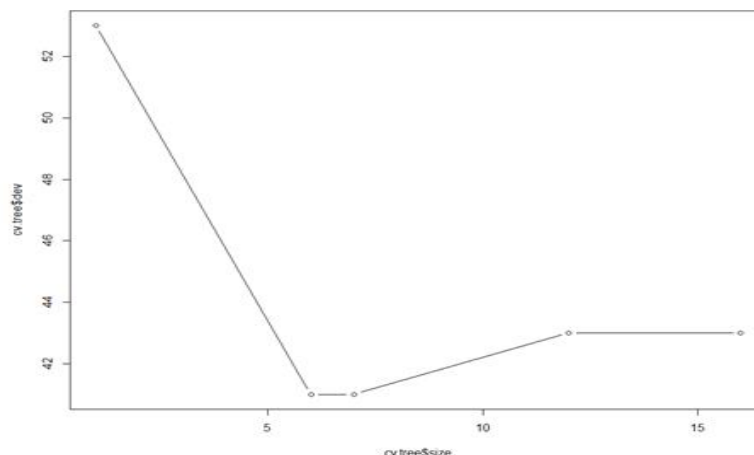
Fig-3: Plotting Cross Validation Error

We checked the outcomed of the prune function by plotting a graph again.Following graph is obtained.
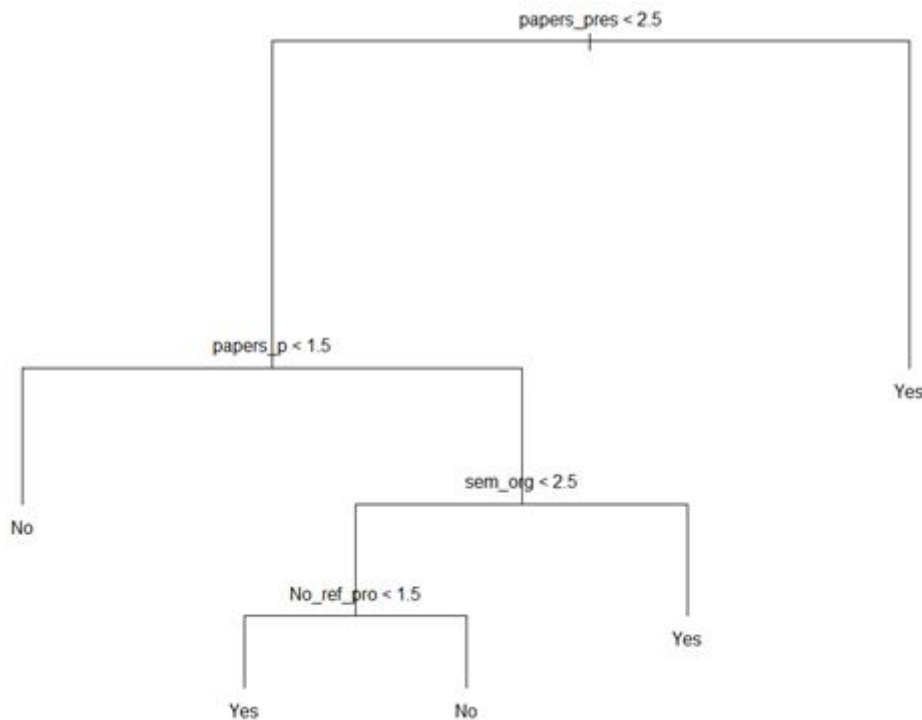
Fig-4: Pruned Tree

The mean (tree_pred!=testing_high)value is 0.1520737 which indicated that the pruned model is better than the predicted model.

Classification Model for Average Cognitive Wisdom
Papers_pres >2.5,papers_p >1.5,Sem_org >2.5,No_ref_pro >1.5

Classification of variables affecting Average Affective Wisdom

VariableName	Description
AvgAffective	Average Affective wisdom Value
fdp_a	Number of Faculty Development Programs attended
papers_p	Number of Papers Published
papers_pres	Number of Papers Presented
sem_org	Number of Seminars Organized
sem_atten	Number of Seminars Attended
work_atten	Number of Workshops attended
work_org	Number of Workshops Organized
books_pub	Number of Books Published
books_ed	Number of Books Edited
phd_guided	Number of PhD Scholars guided
training_atten	Number of special training program attended
No_ref_pro	Number of refresher programs

Table-3: Variables affecting Affective Wisdom

The following objects are masked from mydata: books_ed, books_pub, fdp_a, No_ref_pro, papers_p, papers_pres, phd_guided, sem_atten, sem_org, training_atten, work_atten, work_org.

Sequence of Instruction Flow	Outcomes
dim(mydata)	[1] 433 13
range(AvgAffective)	[1] 1.923077 4.076923
High = ifelse(AvgAffective > 2.50,"Yes", "No")	
set.seed(2) train=sample(1:nrow(mydata),nrow(mydata)/2) test = -train	

training_data=mydata[train,] testing_data=mydata[test,] testing_high=High[test]	
tree_model= tree(as.factor(High) ~ fdp_a + papers_p + papers_pres + sem_org + sem_atten + work_atten + work_org + books_pub + books_ed + phd_guided + training_atten + No_ref_pro , data = training_data)	
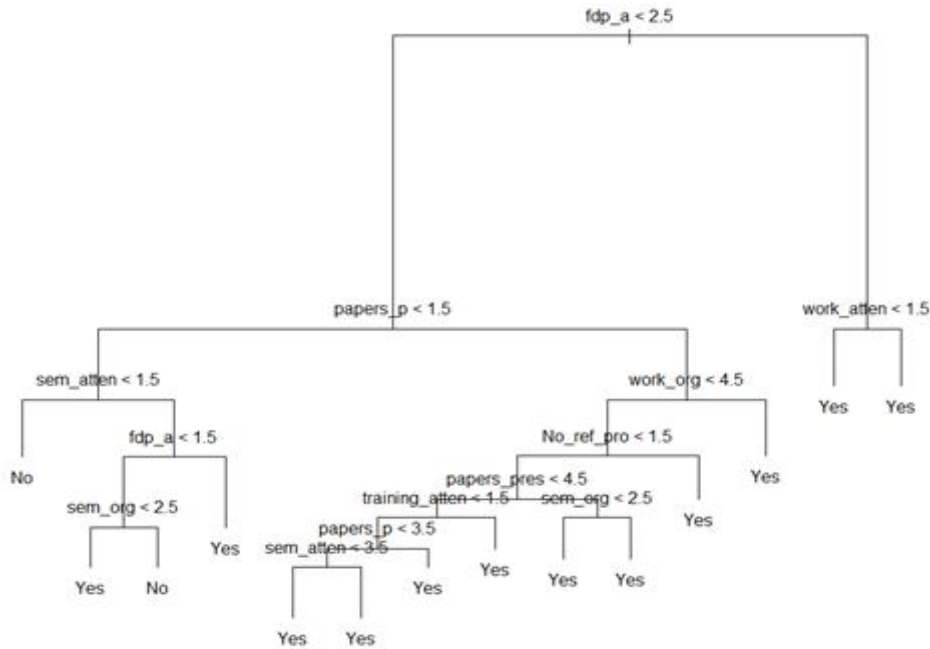
Fig-5: Predicted Tree

Sequence of Instruction Flow	Outcomes
tree_pred<- predict(tree_model, testing_data, type="class")	
mean(tree_pred !=testing_high)	[1] 0.0921659
cv.tree=cv.tree(tree_model, FUN=prune.misclass)	
pruned_model=prune.misclass(tree_model,best=3)	
plot(pruned_model)	
tree_pred=predict(pruned_model,testing_data,type="class") mean(tree_pred!=testing_high)	
mean(tree_pred!=testing_high)	[1] 0.1797235

Results indicate that the predicted model is better than the pruned model.

Classification of variables affecting Average Reflective Wisdom

VariableName	Description
AvgReflective	Average Reflective wisdom Value
fdp_a	Number of Faculty Development Programs attended
papers_p	Number of Papers Published
papers_pres	Number of Papers Presented
sem_org	Number of Seminars Organized
sem_atten	Number of Seminars Attended
work_atten	Number of Workshops attended
work_org	Number of Workshops Organized
books_pub	Number of Books Published
books_ed	Number of Books Edited
phd_guided	Number of PhD Scholars guided
training_atten	Number of special training program attended
No_ref_pro	Number of refresher programs

Table-4: Variables affecting Reflective Wisdom

The following objects are masked from mydata (pos = 4):   books_ed, books_pub, fdp_a, No_ref_pro, papers_p, papers_pres, phd_guided, sem_atten, sem_org, training_atten, work_atten, work_org

Sequence of Instruction Flow	Outcomes
dim(mydata)	[1] 433 13
range(AvgAffective)	[1] 2.333333 3.666667
High = ifelse(AvgReflective > 2.50,"Yes", "No")	
set.seed(2) train=sample(1:nrow(mydata),nrow(mydata)/2) test = -train training_data=mydata[train,] testing_data=mydata[test,] testing_high=High[test]	
tree_model= tree(as.factor(High) ~ fdp_a + papers_p + papers_pres + sem_org + sem_atten + work_atten + work_org + books_pub + books_ed + phd_guided + training_atten + No_ref_pro , data = training_data	
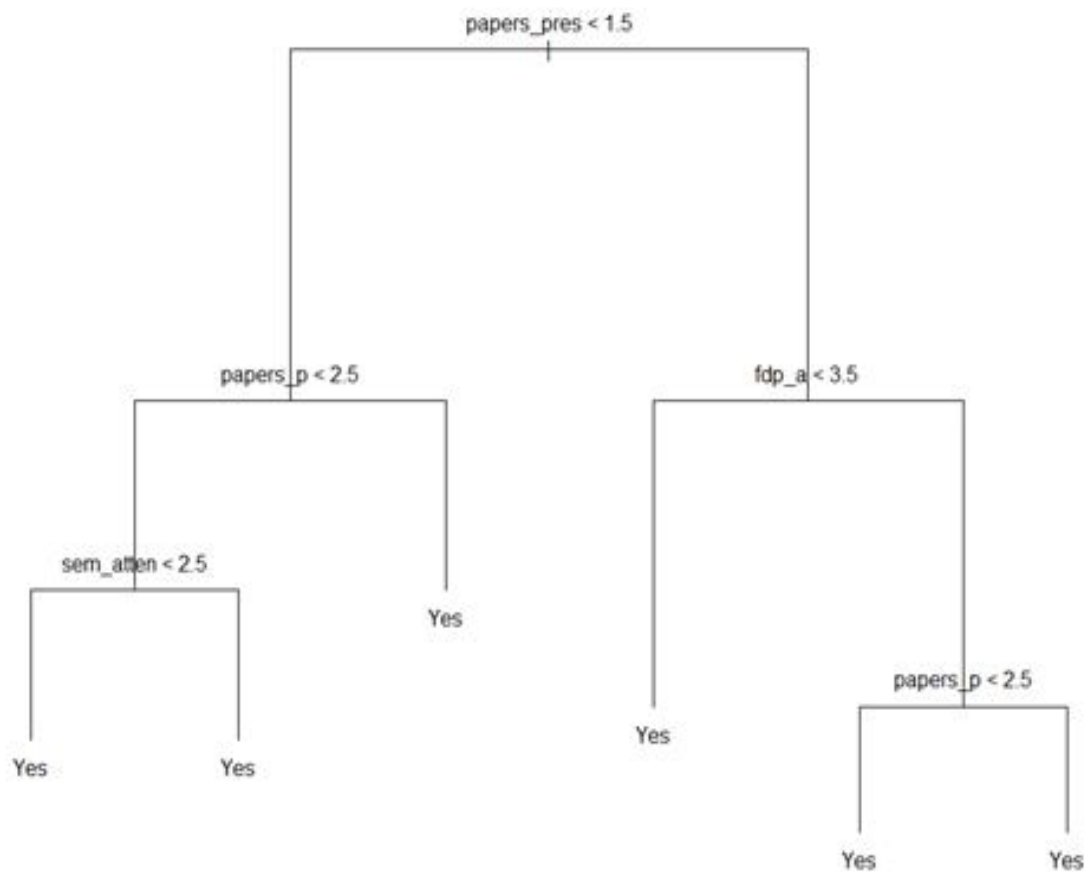
Fig-6: Predicted Tree Model

Sequence of Instruction Flow	Outcomes
tree_pred<- predict(tree_model, testing_data, type="class")	
mean(tree_pred !=testing_high)	[1] 0.1474654
cv.tree=cv.tree(tree_model, FUN=prune.misclass)	
pruned_model=prune.misclass(tree_model,best=3)	
plot(pruned_model)	
tree_pred=predict(pruned_model,testing_data,type="class") mean(tree_pred!=testing_high)	
mean(tree_pred!=testing_high)	[1] 0.04147465
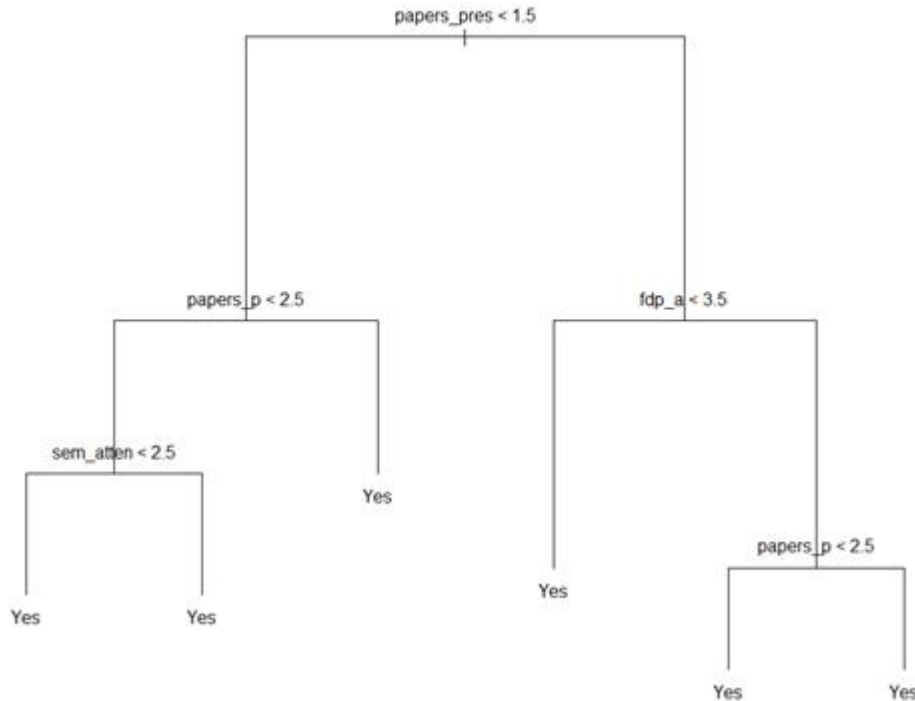
Fig-7: Pruned Tree Model

The mean(tree_pred!=testing_high)value is [1] 0.04147465 which indicates that the pruned model is better than the predicted model.

S. No	Classification Model for Average Reflective Wisdom
1	Papers_pres >1.5,papers_p <1.5,Sem_atten >2.5
2	Papers_pres >1.5,papers_p <1.5,Sem_atten <2.5
3	Papers_pres <1.5,fdp_a>3.5
4	Papers_pres <1.5,fdp_a>3.5,paper_p<2.5
5	Papers_pres <1.5,fdp_a>3.5,paper_p>2.5

CONCLUSIONS

The cognitive development of an individual happens through mental processes and sensory perceptions. Therefore social interactions alongwith maximum utilization of sensory organs enhance development of cognitive processes. The classification model reveals that the number of papers presented, papers published, seminars organised and the number of reference programs attended by faculty members have a strong impact on cognitive wisdom. All of these engagement activities aim to acquire knowledge through interactions with more experienced people. By indulging in these cognitive processes, individuals construct out their own reflections and experiences rather than absorbing knowledge passively. Therefore, it is imperative for academic institutions to keep organizing such events in order to improve the cognitive development of their faculty members. This renders a constructivist's approach to learning and development. We deployed post-pruning in R software after generation of a full decision tree. This improved the accuracy of the overall classification by removing branches which were less significant. Finally, an acceptable mean value (0.15) of the decision tree was obtained in response to the pre-pruned mean value of 0.17 thus validating the model. Faculty development programs impact faculty's educational experience. It integrates knowledge, attitude and skills thereby augmenting overall teaching learning process. Likewise, conferences, seminars and paper presentations enable faculty to touchbase with experienced academicians in their respective fields. Reading out a paper in a conference is a significant professional performance that improves with experience.

Higher affective involvement in faculty members can be obtained by effective integration of all 12 academic learning processes. Affective affirmation engages both heart and mind and affective wisdom can be achieved if an academic activity brings acceptance and approval. A healthy work environment affects affective affirmation. Academicians seek affective affirmation through partipations in workshops, seminars, paper presentations, writing books, publishing articles and other related activities. Therefore academic institutions must encourage continuity in organising such activities to achieve two key affective dimensions of wisdom viz. empathy and compassion (Ardelt, 2005).

Reflection has a paramount role to play in the development of wisdom. Reflective skills among academicians can be gauged by their intuition, introspection, insightfulness, acceptance and creativity. The pruned decision tree model reveals that papers presentations, paper publishing seminars and FDPs contribute heavily in acquiring reflective wisdom among academicians. The mean value of the pruned model is 0.04 in comparison to 0.14 (mean value of pre-pruned model) thus validating the model.

BIBLIOGRAPHY

- Achenbaum, A. W. (1991). Becoming wise: A psycho-gerontological interpretation of the Book of Job. *International Journal of Aging and Human Development, 32*, 21-39.

- Ackoff, R. L. (1989). From data to wisdom. *Journal of Applied Systems Analysis*, 3-9.

- Ardelt, M. (1994). *Wisdom in the later years: A life course approach to successful aging.* Chapel Hill: The University of North Carolina.

- Ardelt, M. (1998). Social crisis and individual growth: The long–term effects of the Great Depression. *Journal of Aging Studies, 12(3)*, 291–314.

- Ardelt, M. (2000b). Antecedents and effects of wisdom in old age: A longitudinal perspective on aging well. *Research on Aging, 22*, 360-394.

- Ardelt, M. (2003). Empirical Assessment of a Three-Dimensional Wisdom Scale. *Research on Aging*, 275-324.

- Ardelt, M. (2004a). Wisdom as expert knowledge system: A critical review of a contemporary operationalization of an ancient concept. *Human Development, 47*, 257–285.

- Ardelt, M. (2004b). Where can wisdom be found? A reply to the commentaries by Baltes and Kunzmann, Sternberg, and Achenbaum. *Human Development, 47*, 304-307.

- Ardelt, M. (2005). How wise people cope with crises and obstacles in life. *ReVision, 28(1)*, 7–19.

- Ardelt, M. (2005b). *A handbook of wisdom: Psychological perspectives.* Cambridge, MA: Cambridge University Press.

- Association, A. P. (2000). Diagnostic and statistical manual of mental disorders, 4th ed., text revision.

- Aubrey, R. &. (1999). *Working wisdom: timeless skills and vanguard strategies for learning organizations.* San Francisco: Jossey-Bass.

- Baltes, P. B. (2000). Wisdom: A metaheuristic (pragmatic) to orchestrate mind and virtue toward excellence [Electronic version]. *American Psychologist, 55*, 122-136.

- Baltes, P. B. (2004). The two faces of wisdom: Wisdom as a general theory of knowledge and judgment about excellence in mind and virtue vs. wisdom as everyday realization in people and products. *Human Development, 47*, 290–299.

- Bassett, C. L. (2006). *Laughing at gilded butterflies: Integrating wisdom development, and learning.* New York: Oxford University Press.

- Beck, S. (1999). Confucius and Socrates: The Teaching of Wisdom.

- Bierly, P. K. (2000). Organizational learning, knowledge and wisdom. *Journal of Organizational Change Management*, 595-618.

- Birren, J. &. (2005). *Wisdom in history, handbook of wisdom: psychological perspectives.* New York: Cambridge University Press.

- Blanchard-Fields, F. &. (1995). *The development of wisdom.* Minneapolis, MN: Fortress Press.

- Blazina, C. (2001). Analytic psychology and gender role conflict: The development of the fragile masculine self. *Psychotherapy: Theory, Research, Practice, Training*, 50-59.

- Bluck, S. &. (2005). *From the inside out: People's implicit theories of wisdom.* Cambridge, MA: Cambridge University Press.

- Brown, A. D. (2000). Organizational identity and learning: A psychodynamic approach. *The Academy of Management Review*, 102-120.

- Brugman, G. M. (2006). *Wisdom and aging.* Burlington, MA: Elsevier Academic Press.

- Chandler, M., & Holliday, S. (1990). wisdom is an postapocalyptic age. In R. Sternberg(Ed.), *wisdom: its nature, origins, and development* (pp. 121-141). Cambridge, U.K.: Cmabridge University Press.

- Chinen, A. (1984). Modal logic: A new paradigm of development and late-life potential. *Human Development, 27*, 42–56.

- Clayton, V. P., & Birren, J. E. (1980). The development of wisdom across the life span: A reexamination of an ancient topic. *life-span development and behavior, 3*, 103-135.

- Dittmann-Kohli, F. B. (1990). *Toward a neofunctionalist conception of adult intellectual development: Wisdom as a prototypical case of intellectual growth.* New York: Oxford University Press.

- Gardner, H. (1999). *Intelligence reframed. Multiple intelligences for the 21st century.* New York: Basic Books.

- Kekes, J. (1983). Wisdom. *American Philosophical Quarterly*, *20*, pp. 277–286.

- Kitchener, K. S. (1990). *Wisdom and reflective judgment: knowing in the face of uncertainty.* Cambridge, MA: Cambridge University Press.

- Labouvie–Vief, G. (1990). *Wisdom as integrated thought: Historical and developmental perspectives.* Cambridge, MA: Cambridge University Press.

- MacIntyre, A. (1985). *After virtue: A study in moral theory.* University of Notre Dame Press.

- Manners, J. &. (2001). A critical review of the validity of ego development theory and its measurement. *Journal of Personality Assessment, 77(3)*, 541-567.

- Nonaka, I., & T., K. (2008). *Managing flow: A process theory of the knowledge-based firm.* New York: Palgrave Macmillan.

- Orwoll, L. &. (1993). Gender and the development of wisdom. *Human Development*, 274-296.

- Orwoll, L. (1989). *Wisdom in later adulthood: Personality and life history correlates.* Boston: Boston University.

- Orwoll, L., & Perlmutter, M. (1990). *The study of wise persons: Integrating a personality perspective.* New York: Cambridge University Press.

- Reber, A. S. (1995). *The Penguin Dictionary o f Psychology (2nd ed.).* London: Penguin Books.

- Sampson, E. E. (1977). Psychology and the American ideal. *Journal of Personality and Social Psychology*, 767-782.

- Scharffs, B. (1998). *The role of humility in exercising wisdom.* University of California: Davis Law Review.

- Staudinger, U. M. (1996). *Interactive minds: Life–span perspectives on the social foundation of cognition.* Cambridge University Press: Cambridge, MA.

- Sternberg. (1990). Wisdom: Its nature, origins, and development., (pp. 142-159). New York: Cambridge University Press.

- Sternberg, R. (1990a). *wisdom: its nature, origins , and development.* cambridge U.K.: cambridge university press.

- Sternberg, R. (1990b). *Wisdom: Its nature, origins, and development.* Cambridge, UK: cambridge University Press.

- Sternberg, R. J. (1990c). *Wisdom and its relations to intelligence and creativity.* Cambridge, MA: Cambridge University Press.

- Sternberg, R. J. (1998). A balance theory of wisdom. *Review of General Psychology*, 347–365.

- Sternberg, R. J. (2003). *Wisdom, intelligence, and creativity synthesized.* Cambridge, MA: Cambridge University Press.

- Sternberg, R. J. (2004b). Words to the wise about wisdom? A commentary on Ardelt's critique of Baltes [Electronic version]. *Human Development, 47*, 286-289.

- Surrey, J. L. (1993). Self-in-relations: A theory of women's development. *Advanced Development*, 1-11.

- Tsoukas, H. (2005). *Complex knowledge: Studies in organizational epistemology.* New York: Oxford University Press.

- Webster. (1961). The Publisher's Guild. *New Tewntieth-Century Dictionary of the English Language, Unabridged.*

- Webster, J. D. (2007). Measuring the character strength of wisdom. *International Journal of Aging & Human Development*, 163-183.

- Wethington, E. (2003). *Turning points as opportunities for psychological growth.* Washington, DC: American Psychological Association.

- Wink, P. &. (1997). Practical and transcendent wisdom: Their nature and some longitudinal findings. *Journal of Adult Development, 4*, 1-15.

PROSPECTS OF RESPONSIBLE TOURISM IN KERALA AND STRATEGIES FOR ITS SUSTAINED GROWTH: FIRM LEVEL EVIDENCE FROM KUMARAKOM IN KOTTAYAM

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ABSTRACT
The immense potential of tourism for bringing about economic development and employment generation is widely recognised in the literature. Promotion of tourism is considered as really meaningful for faster development of nations, particularly for developing nations like India. This fact has been acknowledged by International agencies like the United Nations World Tourism Organization (UNWTO). Notwithstanding the exceptional tourism resources available in India, the country could not utilize these resources properly because only during the last two decades tourism has been getting due attention in the country. Even if India is considered unique in its rich bio-diversity and cultural heritage, the vast tourism potential of the country still remains underutilised. Here lies the need for effective promotion of environment-friendly tourism models like Responsible Tourism (RT) and its variants like ecotourism. In respect of Kerala state in particular – one of the Indian states with the highest level of tourism resources in the whole of India – the situation has been more discouraging because Kerala's performance in the tourism front has not been proportionate with its enviable tourism resources. A few recent studies by the author have pointed out the vast potential of Kerala's tourism sector for faster economic development of the state by way of employment generation, rural livelihood development, community development etc. This paper is a continuation of the earlier studies of the author and it looks into the problems and prospects of the RT initiative of 'Samrudhi' group which is located at Kumarakom in Kottayam district of Kerala – one of the most important RT destinations in the whole of India. The paper suggests strategies for sustainable growth of RT, based on the findings of the study.

Keywords: Responsible Tourism, Sustainability, Foreign Exchange Earnings.

INTRODUCTION
It is widely documented in the literature that tourism is an industry with enormous potential for employment generation and economic development. Hence tourism is promoted aggressively by nations, particularly the developing nations like India. In fact, at the global level tourism is ranked second highest in terms of income generation, and is second only to the oil industry. It is one of the largest and most rapidly growing industries in the whole world. The combined effect of increased leisure and enhanced purchasing power makes tourism affordable to more people. Every country can play a decisive role in tourism and tourism industry is reckoned as very valuable, particularly for the development of global transportation and communication. Of late, this industry is receiving good attention as a foreign exchange earner and in most parts of the world it is aggressively promoted primarily for attracting more foreign exchange. The huge amounts spent by foreign tourists for accommodation, food, transport, recreation, etc. have got linkage effects resulting in overall economic development of the host countries.

In India, after the independence of the country in 1948, the focus of attention of the Government was on the development of sectors like agriculture, industry, infrastructure etc. Tourism sector in India was never considered as a sector with high growth potential and it had been growing at slow pace during the early years of the country's independence. Hence, Indian tourism could not exploit the vast tourism potential of the country during those years. But, since the last two decades or more, there has been an organised effort to aggressively promote tourism by the Government of India. Quite similar to the poor tourism performance of Indian tourism among comparable world nations, the relative performance of tourism sector of Kerala in India has been very poor vis-a-vis other states in the Indian union. In spite of the enviable tourism resources in Kerala state the state is lagging far behind most of the other Indian states, notwithstanding the fact that those states have low tourism endowments.

As India has been showing the best way to strategize sustainable tourism is by way of encouraging the pursuit of tourism in a responsible manner. It is about sensitizing tourists on the need for conserving and maintaining the natural wealth and cultural heritage of a nation. It is observed that through hospitality entrepreneur's rural resources, wild-life and adventure, cultural, health, farm tourism. It should be possible to conserve natural resources as well as increase greater monetary benefits to the people at the local level. Responsible tourism (RT) is a concept which measures the effects of tourism on the well being of the host community, their art and culture, by products, hereditary values and knowledge, as well as on local environment. RT tourism envisages minimum negative effect on the culture of the indigenous society, and on the environment. Simultaneously

tourism shall ensure environmental sustainability besides magnifying host culture. RT and its variants like ecotourism have immense growth potential in a state like Kerala because of the huge demand from foreign tourists. Yet, such models are yet to pick up momentum in Kerala.

LITERATURE REVIEW

The industry report by World Economic Forum (WEF) (2015) [29] 'The Travel and Tourism Competitiveness Report' has done a detailed study of the competitiveness of various countries of the world, in the travel and tourism front. Competitiveness of nations at the regional and global levels based a number of well-defined parameters is dealt in the WEF report. As per WEF report, the global competitiveness of Indian tourism is only 52 as against 17 in respect of China. This indicates a huge performance gap between the two comparable (and neighbouring) nations of the developing world. At the regional (Asia Pacific region) level too, there is a huge gap in the competitiveness, as India is in the 12th position whereas China is ranked in the 6th position. WTTC (2015) [32] in its latest report, 'Economic Impact of Travel & Tourism 2015 – Annual Update' has made an elaborate account of the relative performance of various countries of the world in the tourism front, including region-wise performance and future projections. WTTC has reported that South Asia, led by India and the Middle East, is globally the fastest growing region in terms of the total contribution of Travel and Tourism to GDP. Accordingly, India is one among the bigger, fast growth markets along with China, Indonesia, South Korea and Turkey. Besides, WTTC has reported that South Asia will be the fastest growing sub-region for total Travel & Tourism GDP long-run growth to 2025 (7.0 percent) as India outpaces China. Empirical studies on ecotourism in the Indian context, particularly in the context of Kerala state in the Indian union are rather rare. Some relevant studies are briefly discussed here. Kumar, Yathish (2007) [12] has noted that the aim of tourism is to improve the quality of life of people, provide a good experience to the tourists, and maintain the environmental quality which is vital for both the tourists and the local populace. A macro level study done in the Kerala context by Manoj P K (2008) [16], 'Sustainable Tourism in India: A Study from a Global Perspective with Focus on Tourism Prospects of Kerala' points out the vast growth prospects of sustainable tourism in Kerala from a global perspective. The author has suggested some strategies for the faster growth of sustainable tourism with special reference to the Kerala state in India. In another Kerala-based study, Oommen M. A. (2008) [23] warned about the danger of overlooking the environmental sustainability in development activities in the state. While referring to the growing environmental issues in Kerala from the perspective of the state's economic development model viz. 'Kerala model of development' the author has pointed out in detail the environmental and ecological issues that the state faces at present; the current scenario being critically referred to as one of 'Ecological Overkill' in his paper. The day by day worsening situation of the natural environment in Kerala and its adverse impact on the long-term sustainability of tourism has been noted by many researchers, pointing out the need for environment-friendly (nature-friendly) tourism models like ecotourism and its variants like rural tourism, responsible tourism etc. Notably, the macro level study by Manoj P K (2009) [17], 'Environment Friendly Tourism for Sustainable Economic Development in India', for instance, underscores the cardinal significance of tourism in India for its rapid economic development; and at the same time point out the need for promoting environment-friendly (and hence sustainable) tourism models. The author, thus, makes a few strategies for development of environment-friendly tourism in India. In his book on 'Ecotourism Development Management', Singh, Sarvjeet (2009) [25] has stated that ecotourism is entirely a new approach in tourism and it provides opportunities for visitors to experience powerful displays of nature and culture and to learn about the importance of biodiversity, conservation and local cultures. It focuses on volunteering, personal growth and finding innovative means to live on the earth. It involves travels towards locations wherein flora, fauna, cultural heritage etc. are the main attractions. It encourages the active participation by the local population in the conservation and education dimensions of tourism development process.

In a research article by Manoj P K (2010) [18], 'Tourism in Kerala: A Study of the Imperatives and Impediments with Focus on Ecotourism', the tourism sector in Kerala state in India is analysed in detail using the SWOT model. Accordingly, strategies are suggested for the faster and sustainable development of tourism in Kerala. Sudheer, B (2015) [26] in his research report submitted to University Grants Commission (UGC), New Delhi titled 'Economic and Cultural Impact of Responsible Tourism Initiative in Kerala – A Case Study of Kumarakom Panchayath' has highlighted the need for alternative and innovative practices like Responsible Tourism (RT) to minimise the negative effects of tourism on environment and to make it sustainable in the long-term. With respect to RT at Kumarakom in Kerala, the positive effects like employment to the local people, empowerment of women through RT-related activities (like, providing vegetables, fish, meat etc. often procured locally), positive linkage effects on the locality (like, earnings arising from the purchases made by tourists) etc. have been pointed out. An empirical study by Manoj P K (2015) (a) [19], 'Prospects of Responsible Tourism in Kerala: Evidence from Kumarakom in Kottayam District' focuses on ecotourism in

Kerala and based on the findings of his study makes some suggestions for sustainable ecotourism development in the state. Another empirical study by Manoj P. K (2015) (b) [20], 'Employment Generation from Rural Tourism: A Field Study of the Local Community at Kumbalangi, Kerala' is based on the feedback obtained from the local community about their perceptions on the employment prospects of rural tourism, their expectations about the required Governmental interventions etc. The high prospects of employment generation and economic development on the one hand, and the need for enhanced tourism infrastructure, primarily through Government initiatives, on the other hand, are noted. Another study by Manoj P K (2016) [21], "Impact of Rural Tourism on the Environment and Society: Evidence from Kumbalangi in Kerala, India", in *International Journal of Advance Research in Computer Science and Management Studies (IJACSMS)* has pointed out the obvious positive effects of rural tourism but warned about the urgent need to preserve the environmental purity through managing the inflow of tourism, controlling the use of non-degradable wastes like plastics, better thrust on maintaining the cleanliness etc. In a study by Manoj P K (2017) [22], "Segmentation Strategy for Promotion of Ecotourism Products: Evidence from Thenmala Ecotourism" in *South Asian Journal of Socio-Political Studies (SAJOSPS)*, the author has studied as to whether the socio-economic factors have influenced the decisions of the tourists and suggested the segmentation strategy for tourists.

Though there are many studies on tourism done in the Indian context, including a few studies on RT and its variants like ecotourism in the Kerala context, empirical studies on RT in Kerala, particularly studies with reference to RT in 'Kumarakom' – one of the most prominent RT destinations in India – are very scarce, despite the growing significance of RT in India. So, this study focuses on the RT initiative of 'Samrudhi' group at Kumarakom in Kottayam district of Kerala – one of the most important RT destinations in India. Based on the findings of the study, it seeks to make strategies for sustained growth of RT in Kerala.

RELEVANCE AND SIGNIFICANCE

The concept of inclusive growth is great relevance today, especially for the developing countries like India. This concept replaced the theoretical culmination of classical economists in the formulation of the developmental policy. In India, inclusive growth was the major concern of the Indian policy makers from the 11th Plan (2007-2012). Since then it is being included in almost all the national policy frameworks of the Government of India. The idea of inclusive growth stresses on the socio-economic inclusion of the backward classes, weaker sections, and other lower strata people by ensuring their active and productive participation in the development activities of the State. The current development philosophy emphasises the importance of participation, and tourism models like RT and ecotourism imbibe this philosophy. Empirical studies on RT are scarce. This study seeks to bridge this research gap.

OBJECTIVES

(i) To make an overall study of the prospects of tourism in Kerala, foreign exchange earnings from tourism and trend in foreign tourist arrivals, with a focus on responsible tourism (RT) initiatives and their potential for economic development of Kerala;

(ii) To make a detailed study of the RT initiative of 'Samrudhi' group in Kumarakom in Kerala, the benefits, problems and future prospects of the above RT initiative; and

(iii) To make suggestions for sustained growth of RT, based on the findings of this study.

METHODOLOGY OF THE STUDY

This study is descriptive-analytical and exploratory in nature. Both primary and secondary data are used for this study. Primary data are collected using a sample survey with help of an Interview Schedule from the study area viz. Kumarakom RT destination – a major RT destination in the whole of India. The primary objective of the study being to understand the problems of the RT industry and to find out their remedies, a survey was conducted among the 336 respondents in the study area using Simple Random Sampling (SRS) procedure. Secondary data are collected from the publications of United Nations World Tourism Organization (UNWTO), World Travel and Tourism Council (WTTC), Kerala Tourism Development Corporation (KTDC), Kerala State Planning Board, tourism statistics published by the tourism departments of Governments of Kerala and India, reports on tourism industry by reputed agencies like FICCI, IBEF etc. Popular statistical tools are used for data analysis.

6. ANALYSIS AND DISCUSSION

An assessment of the normality and statistical reliability has been done before further validation analysis. Reliability refers to the degree of dependability (consistency) of a scale. This being a study based on field survey, consistency (reliability) is tested using Cronbach's Alpha. An Alpha value of 0.70 or more denotes strong internal consistency while a value of 0.60 or more is considered to be significant. It is noted that the scale

is reliable (Table I). Next, normality is tested using Kolmogorov-Smirnov (KS) test. The K-S test indicates that the data used is normal (Table I). As the data is normal and scale is reliable (consistent) we can proceed towards further statistical analysis viz. parametric tests.

Table -I: Reliability and Normality Tests – Problems in Tourism Industry

Title of the Test used [Purpose of the Test]	Mean	S.D	1.607	0.109
Kolmogorov-Smirnov [Test for Normality]	15.29	3.45	K-S (Z value)	(P value)
Cronbach's Alpha [Test for Reliability]	0.786 (Alpha value)		6 (Number of items)	

Source: Based on Survey data

7. PROSPECTS OF TOURISM IN KERALA AND THE CASE OF RESPONSIBLE TOURISM (RT)

The performance of tourism in Kerala state in the Indian union has been impressive, both in absolute and relative terms. In fact, there has been a generally increasing trend in respect of foreign tourist arrivals to Kerala over the years and also the share of Kerala in the tourism revenue for the total of the Indian union. Still, there is scope for further improvement in view of the enviable tourism potential of Kerala – the God's own country vis-à-vis the rest of India. It is noted that there has been an increasing trend in respect of both foreign tourists and domestic tourists to Kerala over the 18 years' period from 2000 to 2017. (Table I).

Table -I: Trends in Domestic and Foreign Tourist Arrivals into Kerala (2000-2017)

Year	Domestic Tourists	Percentage Change	Foreign Tourists	Percentage Change
2000	5013221	2.6	209533	3.8
2001	5239692	4.5	208830	-0.5
2002	5568256	6.3	232564	11.3
2003	5871228	5.4	294621	26.7
2004	5972182	1.7	345546	17.3
2005	5946423	-4.3	346499	.27
2006	6271724	5.47	428534	23.7
2007	6642941	5.92	515808	20.37
2008	7591250	14.28	598928	16.11
2009	7913537	4.25	557258	-6.96
2010	8595075	8.61	659265	18.31
2011	9381455	9.15	732985	11.18
2012	10076854	7.41	793696	8.28
2013	10857811	7.75	858143	8.12
2014	11695411	7.71	923366	7.60
2015	12465571	6.59	977479	5.86
2016	13172535	5.67	1038419	6.23
2017	14673520	11.39	1091870	5.15

Source: Govt. of Kerala (2018), *Economic Survey*; and Tourism statistics (Kerala Tourism).

It has been observed that there are a few areas wherein Kerala has got a comparative advantage over the rest of India as well as even other countries of the world. The unique socio-economic and geographic profile of Kerala has added significantly towards making it one of the sought-after tourist destinations of the entire world. The lengthy coastal belt, peculiar geographical location, lusty backwaters, a large number of beaches, serene hillocks, moderate climate throughout the year, highly literate populace etc. are some of the factors. Health tourism (Ayurveda fame) and Medical tourism (cost-effectiveness) have got excellent prospects in Kerala. Whether it is based on Ayurveda or modern medicine, Kerala has got an excellent brand either because of reputation or cost-effectiveness. Way back in 2000 Kerala had drafted a comprehensive tourism policy viz. *Vision 2020* that had given due consideration to the sustainability aspects of tourism growth along with its economic and feasibility aspects. This policy sought to develop tourism as one of the core competencies of the State and also to regulate the tourism initiatives properly taking into account the broader and long-term interests of the State, like, environmental conservation, protection of heritage and culture, development of tourism infrastructure, quality standards etc. In short, it aimed at using a sustainable and integrated approach to tourism promotion in Kerala.

The Department of Tourism (DoT) of Kerala state has formulated a three-pronged strategy to maintain and further improve the superior position of Kerala in the global tourism map. Accordingly, 3 broad strategies viz. (i) Product Innovation, (ii) Innovative Marketing, and (iii) Strategic alliance with the Govt. of Rajasthan.

Besides, there are efforts in the direction of obtaining the benefits of Special Economic Zones (SEZs) for tourism, so that SEZs for tourism could be established meaningfully.

The recently drawn up 'Kerala Tourism Policy 2017' has given a further boost to RT initiatives in Kerala whereby Responsible Tourism Mission (RT Mission) will be implemented to promote RT in the state in a systematic manner. Naturally, Kumarakom RT initiative, the pioneer one and well known even globally, will be the hub of all RT initiatives. In respect of responsible tourism (RT) in particular, the prospects of Kerala are quite good given the potential of RT in providing gainful employment and means of livelihood for the local community without adversely affecting the environment. Thus, RT initiatives that are sustainable in the long run could be developed across a large number of tourism destinations in Kerala, mostly located in its lengthy and serene coastal areas, forest areas etc. The present study the 'Samrudhi' group RT restaurant is located in Kumarakom in Kottayam district, a prominent tourist spot in Kerala characterized by extremely serene backwaters and lakes.

RESPONSIBLE TOURISM (RT) INITIATIVE OF THE 'SAMRUDHI' GROUP: A STUDY
The RT initiative of the 'Samrudhi' group is located in Kumarakom in Kottayam district of central Kerala. There are 15 active members in this typical RT service provider group. Further details regarding their socio-economic status, earnings from the RT initiative, problems faced etc. are discussed in the following paragraphs.

Table-II: Educational Qualification of 'Samrudhi' Members

Educational level	Numbers of respondents	Percentage
SSLC	8	53.3
Plus Two / Pre-Degree	6	40
Graduation	1	6.7
Total	15	100

Source: Field Survey

Table-III: Age of 'Samrudhi' Members

Age	Number	Percentage
Below 35	2	13.3
36-40	9	60
41-45	4	26.7
Above 45	15	100

Source: Field Survey

From Table III it is noted that majority (60 percent) of the RT members are in the age group 36 to 40 years. This age group is active in earning the livelihood for their families.

Table-IV: Type of house of respondents

Nature of house	Number of respondents	Percentage
Concrete	11	73.3
Tiled	4	26.7
Total	10	100

Source: Field Survey

Table IV shows the type of houses of the members. Four members are having tiled houses while 11 members have concrete houses. Of the 11 members with concrete houses, 6 have procured or constructed their houses after joining 'Samurdhi' ethnic restaurant. This shows that their financial status in on the rise.

Table-V: Monthly Income of each member

Year	Average Monthly Income for the year (Amount in Rupees)
2011-12	4500
2012-13	5000
2013-14	6000

Source: Field Survey

Table V shows an increasing trend in the annual income of the 'Samrudhi' members as a result of the growing earnings from their customers – the tourists.

Table-VI: Saving amount of 'Samurdhi ' Members

Amount per month	Number of members
200	4
300	7
400	3
500	1

Source: Field Survey

RT has resulted in the increased arrival of tourists and this, in turn, has increased the tourism revenue for the 'Samrudhi' ethnic restaurant. Table VI shows that the members have the saving habit and they had increased their saving habit after joining the 'Samrudhi' group.

'SAMRUDHI' ETHNIC RESTAURANT: INVESTMENT, SERVICES PROVIDED, AND PROBLEMS
The restaurant was opened with an aim to serve traditional food to tourist of Kumarakom in Kottayam district. An Initial investment of two lakhs rupees was taken as loan from Kudumbasree at an interest rate of 12.5 percent. In which one lakh rupees were given subsidy. The building that used is for rent at a nominal rate of 3600per month. The group consists of ten members in which they are working on a shift basis. Five members will take a shift which time starts at 06:30 am and ends at 03:30 pm and another at 03:30 pm and ends at 06.30 pm. This group is also getting orders from tourist agents.

PROBLEMS OF 'SAMRUDHI' ETHNIC RESTAURANT
➢ Water scarcity

➢ Fridge facility must be provided

➢ Insufficiency of funds

'SAMRUDHI' KIOSKS: INVESTMENT, SERVICES PROVIDED AND PROBLEMS
The kiosks are provided by Kerala Tourism Department .1.25 lakhs were given to Kudumbasree to start kiosks. The group consists of 5 members. These kiosks provide vegetables and fruits to resorts in 15 days credit. From this business, they get an income and this is a regular business. They provide coconut juice and snacks to tourists.

PROBLEMS OF 'SAMRUDHI' KIOSKS
➢ No electricity connection. (If it is provided they can provide cool drinks and juice).

➢ Tourism department must link more resorts for their products.

➢ Insufficiency of funds

11. MAJOR FINDINGS OF THE STUDY
➢ Scio–economic conditions of Samudhri group members have increased.

➢ Education is not an obstacle in starting a business in this tourism sector.

➢ Majority of Domestic tourists only prefer these type of traditional food

➢ Majority of foreign tourist arrives here pre-booking facility or in package tourism which may benefits only to resort owners.

12. SUGGESTIONS AND CONCLUDING REMARKS
The suggestions for the sustained development of the sector are as follows

➢ Tourism department must encourage more these type of locals to run hotels, shops and others facilities to tourists.

➢ These types of groups must to be added to other tourist destinations to increase employment opportunities to local folks.

➢ The Government should promote RT initiatives through provision of utilities like electricity, telecommunication and internet services at reduced rates.

It is noted that there is ample potential of responsible tourism (RT) in Kerala if it is properly encouraged and the requisite infrastructure and other services are facilitated by the Government. The initiatives of the Government in the direction of promotion of RT should be further developed and higher outlays needs to be earmarked to RT sector.

13. CONCLUDING REMARKS

In view of the foregoing discussions, it may be noted that promotion of ecotourism in Kerala would ensure rich dividend in the days to come, given the huge growth prospects of ecotourism in the state. Careful analysis of the exact tastes and preferences of the customers, considering their socio-economic, demographic and such other factors is very important. The design considerations of various products like Tour Packages and ingredients thereof, should duly take into account the tastes and preferences of various segments. So, a well thought out STP strategy should be used for product design, delivery and re-design on a constant basis.

REFERENCES

(1) Ajith Kumar M.K. (1998), "Psychographic & Demographic Profiles of Foreign Tourists Visiting Kerala with special reference to Spending Patterns", *Unpublished Ph.D. Thesis*, Cochin University of Science and Technology (CUSAT), Kochi, Kerala.

(2) Ballabh, Aanandh (2005) *Fundamentals of Travel and Tourism*, Akansha Publishing House

(3) Brundtland G.H. (1987), *The Brundtland Report, World Commission on Environment and Development*, Oxford University Press.

(4) Bhatia, A.K. (1996), *Tourism Development: Principles and Practices*, Sterling Publishers Pvt. Limited, New Delhi – 110 020 (India).

(5) Bijender K. Punia (1994) *Tourism Management – problem and prospects* pp169, Ashish Publishing House, New Delhi

(6) Chatak, G.R. (2007), *Sustainable Tourism Codes and Guidelines*, Cyber-Tech Publications, Daryaganj, New Delhi, First Edition.

(7) Clark, J.R. (Ed.) (1991), *Carrying Capacity: A Status Report on Marine and Coastal Parks and Reserves,* University of Miami/US National Park Service, Washington, DC.

(8) Clifford J (1998), *The Predicament of Culture: 20th Century Ethnography, Literature and Art, Cambridge,* MA: Harward University Press

(9) Brandon, K. (1996). Ecotourism and Conservation: A Review of Key Issues. Washington, DC: The World Bank.

(10) Govt. of Kerala, *Economic Review,* State Planning Board, Thiruvananthapuram, Kerala – for the years 2008 to 2017. [Available online at https://spb.kerala.gov.in].

(11) Kabia, Sunil K. (2005), *Tourism and Environment*, Mohit Publications, New Delhi, First Edition.

(12) Kumar, Yathish (2007), "Tourism Sector and Sustainable Development", *Southern Economist,* Vol. 45, No. 9.

(13) Lane, B. (1991), "Sustainable Tourism, a new culture for the Interpreter", *Interpretation Journal*, Vol. 49.

(14) Lindberg, K., and J. Enriquez (1994), *An Analysis of Ecotourism's Contribution to Conservation and Development in Belize*, Vol. 2. Washington: World Wildlife Fund.

(15) McNeeely, J.A., J. Thorsell., and H. Ceballos-Lascurain (1992), *Guidelines: Development of National Parks and Protected Areas for Tourism*, WTO/UNEP/IUCN, Madrid.

(16) Manoj P. K. (2008), "Sustainable Tourism in India: A Study from a Global Perspective with Focus on Tourism Prospects of Kerala", *Proceedings of Second International Conference on Responsible Tourism in Destinations*, 21-24 March, 2008, p.7. Also available online in the [Official website: http://www.artyforum.info/documents/MicrosoftWord-MANOJ-Poster.pdf]

(17) Manoj, P. K. (2009), "Environment Friendly Tourism for Sustainable Economic Development in India", *International Journal of Commerce and Business Management,* pp.139-147.

(18) Manoj P K (2010), "Tourism in Kerala: A Study of the Imperatives and Impediments with Focus on Ecotourism", *Saaransh RKG Journal of Management,* Vol. 1, No. 2, Jan. 2010, pp.78-82.

(19) Manoj P K (2015), "Prospects of Eco tourism in Kerala: Evidence from Kumarakom in Kottayam District" *International Journal of Research in Management and Social Science,* Vol. 3, Issue 1 (II), Jan. – March 2015, pp. 54-59.

(20) Manoj P K (2015), "Employment Generation from Rural Tourism: A Field Study of the Local Community at Kumbalangi, Kerala", *International Journal of Applied Services Marketing Perspectives (IJASMP),* Vol. 4, No. 4, Oct.-Dec. 2015, pp.1880-1888.

(21) Manoj P K (2016), "Impact of Rural Tourism on the Environment and Society: Evidence from Kumbalangi in Kerala, India", *International Journal of Advance Research in Computer Science and Management Studies (IJARCSMS)*, Vol. 4, Issue 2, Feb. 2016, pp.148-159.

(22) Manoj P K (2017), "Segmentation Strategy for Promotion of Ecotourism Products: Evidence from Thenmala Ecotourism", *South Asian Journal of Socio-Political Studies (SAJOSPS)*, Vol.18, No.1, July-Dec. 2017, pp.112-119.

(23) Oommen, M. A., (2008), "Reforms and the Kerala Model", *Economic & Political Weekly*, Vol. XLIII, No.2, Jan. 12-18, 2008, pp. 22-25.

(24) Singh, Ratandeep (2008), *Tourism Marketing Principles, Policies and Strategies*, Kanishka Publishers & Distributors, Darya Ganj, Delhi – 110 002 (India).

(25) Singh, Sarvjeet (2009) *Ecotourism Development Management* A.K. Publications, New Delhi

(26) Sudheer, B. (2015), "Economic and Cultural Impact of Responsible Tourism Initiative in Kerala – A Case Study of Kumarakom Panchayath", *Research Report,* Research Sponsored by the University Grants Commission (UGC), New Delhi. (www.sncollegecherthala.in).

(27) Verma, J. (2007), *Dynamics of Indian Tourism Issues & Challenges*, Cyber-Tech Publishers, Daryaganj, New Delhi, First Edition.

(28) ATREE (2006), *White Paper on Ecotourism Policy* (Draft), April, pp 4-5.

(29) WEF (World Economic Forum) (2015), *The Travel & Tourism Competitiveness Report 2015,* 91-93 route de la Capite, CH-1223 Cologny, Geneva, Switzerland.

(30) United Nations World Tourism Organization (UNWTO) (2015), *UNWTO Tourism Highlights 2015 Edition*, Calle Capitán Haya, 42 28020 Madrid, Spain.

(31) Weaver, D.B. (2001), *Ecotourism,* John Wiley & Sons: Milton

(32) World Travel & Tourism Council (WTTC) (2015), *Economic Impact of Travel & Tourism 2015 Annual Update*, Harlequin Building, 65 Southwark Street, London, SE1 0HR, United Kingdom.

(33) Govt. of Kerala (2014), *Kerala Tourism Statistics 2014*, Research & Statistics Division, Dept. of Tourism, Thiruvananthapuram.

(34) Govt. of India (2014), *India Tourism Statistics at a Glance 2014*, Dept. of Tourism, New Delhi.

(35) Official website of World Tourism Organisation (WTO), www.unwto.org

(36) Official website of World Travel and Tourism Council (WTTC), www.wttc.org

(37) Official website of Kerala Tourism (Government of Kerala), www.keralatourism.org

(38) Official website of Incredible India (Government of India).

IN THE NAME OF ALLAH, THE MOST MERCIFUL AND THE MOST BENEVOLENT: THE RELEVANCE OF INTEREST FREE ISLAMIC FINANCE TO INDIAN AGRICULTURE SECTOR

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ABSTRACT

India ranks 11th and 12th globally in services and manufacturing sectors respectively, and second in the world in the agricultural sector. (Business Standard, 2016) It provides employment to 48.9% of Indian workforce. (T. Anand, 2017) On the other hand, on an average one farmer committed suicide for every 53 minutes in India between 1997 and 2008. (Dr. P. Deshmukh, 2011) Sarcastically, Punjab state, which is benefited most from the green revolution, reported 4687 farmers' suicides between 1995 and 2015.(Dhanunjaya Mahapatra, 2017) National Crime Records Bureau reported that 2, 474 farmers who have committed suicides out of the studied 3000 farmer suicides in 2015, have the unpaid loans taken from local banks. (Dhanunjaya Mahapatra, 2017) MS Swaminathan, who is acknowledged as the father of green revolution in India, recommended Islamic Banking and Finance (IBF) products to stop farmers suicides in India. (The New Indian Express, 2010) Whether or not IBF is effective in agriculture sector than conventional banking, is the research question of this paper. To test it two countries are selected viz. India and Pakistan, of which one is based on conventional banking system and the other is based on IBF principles. Two variables Credit To Agriculture (CTA) and Agriculture Gross Value Added (AGVA) in terms of local currency units in millions are selected from the database of Food and Agriculture Organization of United Nations for both the countries. They are converted into real values by using a deflator, and then logged to make them stationary of less order, and then Granger causality test is performed. The results evidenced that there is no ganger causality running from agricultural credit to agricultural gross value added in case of India whereas there exists ganger causality from agricultural credit to agricultural gross value added in case of Pakistan. Hence, it is concluded that Islamic banking and finance is relevant to India in bringing long rum causality between CTA and AGVA.

Keywords: Islamic Banking, Agriculture, Relevance to India, LCU in millions

INTRODUCTION
Agriculture used to occupy a big share in India's GDP in the early days of independence. Over a period of 70 years, Indian economy has slowly transformed itself into a service based economy. According to Ministry of Statistics and Program Implementation, Government of India report (2017), service sector is the largest sector with Gross Value Added (GVA) at current prices is estimated at Rs. 73.79 lakh crore in 2016-17 and accounts for 53.66% of total India's GVA. With GVA of Rs. 39.90 lakh crore, industry sector contributes 29.02% while agriculture and allied sector has the share of 17.32% with GVA of Rs. 23.82 lakh crore. Still, agriculture sector provides employment to Indians at a great volume than services and industry sectors. The share of agriculture in employment was 48.9 per cent of the workforce. (T. Anand, 2017).

Paradoxically, on the other side of the coin, there is a continuous growth in the suicides of farmers due to debt trap. The number of farmers who have committed suicide since 1997 to 2008 at all India level was 1, 99, 132. On an average one farmer committed suicide for every 53 minutes in India **(Dr. P. Deshmukh, 2011)**. National Crime Records Bureau estimated that not less than 200000 farmers committed suicide between the above said period. **(Dr. P. Deshmukh, 2011)** In a reply to Supreme Court, the central government said that over 12,000 farmers committed suicide every year since 2013. (Dhanunjaya Mahapatra, 2017). Maharashtra topped the list with 4,291 suicides, followed by Karnataka with 1,569, Telangana 1,400, Madhya Pradesh 1,290, Chhattisgarh 954, Andhra Pradesh 916 and Tamil Nadu 606. Ironically, Punjab, which is benefited most from the green revolution, also presents a depressing picture of farmer's suicides in India. About 4, 687 farmers' suicides have been reported from the state of Punjab between 1995 and 2015 of which 1, 334 are from Mansa district alone. (Dhanunjaya Mahapatra, 2017) Monsoon failure, climate change, high debt burdens, government policies, mental health, personal issues and family problems etc. are the reasons of farmers' suicides in India. National Crime Records Bureau indicates that 2474 farmers who have committed suicides out of the studied 3000 farmer suicides in 2015, the victims have unpaid loans taken from local banks. (Dhanunjaya Mahapatra, 2017) This is clear enough an indication for drawing correlations between the two. Added to the wound, inflated prices of agricultural inputs reducing the profits of farmers. For wheat, the cost at present is three times than it was in 2005. (Dhanunjaya Mahapatra, 2017)

MS Swaminathan, who is known as the father of green revolution in India, while speaking at Karuna Ratna award presentation function, said *"The exorbitant lending rates charged by money lenders in Vidarbha had*

created a vicious cycle of debt and suicide in the region. Even yesterday we heard news about 30 farmers who committed suicide in Vidarbha. Islamic banking, which propagates zero interest lending, could hold the key to solve this crisis". (The New Indian Express, 2010)

NEED OF ISLAMIC FINANCE TO AGRICULTURE SECTOR

Though there are numerous reasons for farmers' suicides, one of the major reasons is the debt based loan taken by farmers and unable to pay even the principal amount. Salam, an Islamic finance product, is developed to meet the needs of the farmers. In Salam, a farmer agrees to supply specific goods (agricultural output) to the buyer (Islamic Bank) at a future date in exchange of an advanced price fully paid to the farmer at spot. Salam is exceptionally good in meeting the needs and requirements of small farmers who need finance for growing their crops and to feed their families till the time of harvest. Salam is beneficial to the seller as he receives the price in advance and it is beneficial to the buyer also as normally the price in salam is lower than the price in spot sale. There are two ways of using salam for the purpose of financing. After purchasing a commodity by way of salam, the bank can sell it through a parallel contract of salam for the same date of delivery. The difference between the two prices shall be the profit earned by the institution. The shorter the period of salam, higher the price and the greater the profit. In this way, banks can manage their short term financing portfolios. The second option before the bank is to obtain a unilateral promise to purchase from a third party and it is not required that the third party has to pay any amount to the bank for this promise. When the institution receives the commodity, it can sell it at a pre-determined price to a third party according to the terms of the promise. Some of the risks that are present in salam financing for banks are as follows:

Table–1: Risk Mitigation in Salam Contract by Islamic Banks

Type of Risk	How to minimize?
1. *Delivery Risk*: The customer delays the delivery of goods	• Wait until the goods are available. • Cancel the contract and recover the salam price • Agree on the replacement of goods provided the market value of the replaced goods does not exceed the market value of the original salam subject-matter
2. *Quality Risk:* The customer delivers defected / inferior goods.	• Reject delivery • Accept it at a discounted price.
3. *Price Risk:* The market price of goods decreases after Islamic bank enters a Salam agreement.	• Parallel Salam • Find a third party and obtain the promise to purchase
4. *Storage Risk:* Goods received by the bank from the farmer remain a risk until sold to the ultimate purchaser.	• Obtain takaful (insurance) coverage for salam goods • Minimize the time period between the acceptance of delivery and delivery to the ultimate purchaser.

RESEARCH QUESTIONS

No doubt, the government, through banks, is trying to provide loans to farmers to strengthen the agriculture sector. But, is there any correlation between Credit To Agriculture (CTA) and Agriculture Gross Value Added (AGVA) in India? If so, is it positive or negative? Whether CTA granger causes AGVA in India or not? As mentioned above, many experts are of the opinion that Islamic banking and finance can be a solution to solve agriculture sector problems of India. But India is not offering loans to farmers based on IBF principles. But Pakistan is doing so. Hence, the same set of research questions are tested for Pakistan's agriculture sector.

RESEARCH METHODOLOGY

The source of data is the Food and Agriculture Organization of United Nations which provides free access to food and agriculture data of 245 countries and territories and covers all FAO regional groupings from 1961 to most recent year. *Annual Credit to Agriculture (CTA) and Agriculture Gross Value Added (AGVA) in millions of local currency units are the variables considered for the study.* Agriculture deflator is used to convert the data into real data. Based on the availability of data, the period of study is 1996 to 2014 in case of India and 1994 to 2014 in case of Pakistan.

DATA ANALYSIS AND INTERPRETATION

The Karl Pearson's correlation coefficient (r) between CTA and AGVA in nominal values in case of India and Pakistan are computed. However, real values are more reliable than nominal; hence they are converted into real values. Log series of a variable has more chances of making the series stationary at level or at first level. Hence, both the variable series are converted into log series. Correlation coefficient is computed for real as well as log real data. The following table shows the correlation coefficient between nominal, real and log of real series data related to CTA and AGVA.

Table–2: Correlation between different forms of CTA and AGVA for India and Pakistan

S. No.	Correlation Coefficient between	India	Pakistan
1	CTA and AGVA	0.86	0.94
2	RCTA and RAGVA	0.64	0.75
3	LRCTA and LRAGVA	0.81	0.79

From the table, it can be inferred that in case of both the countries there exists a positive and high correlation coefficient. However, it is more in case of Pakistan than India. But log series correlation coefficient is slightly higher in case of India than Pakistan.

It is of interest to know whether there is any cause and effect relationship between these variables in these countries. It can be assessed by using granger causality test. To apply this test, at the very first, it is to be determined whether the variables' series are stationarity or not? If all the variables are stationary at level i.e. of order I (0), simple regression is used. If all the variables are stationary at same level, Johansen co-integration test is performed in order to trace long run equilibrium between the variables of study. If co-integration is found, Error Correction Model (one dependent and one independent variable) and Vector Error Correction Model (one dependent and more than one independent variable) are used to check for granger causality. If there is no co-integration, then either Unrestricted Vector Auto Regression Model (Unrestricted VAR) or Granger Causality test are used. There is one more test called Toda and Yamamoto Test which is used when the variables are of different orders i.e. I (0), I (1) and I (2).

TESTING CAUSALITY FROM LRCTA TO LRAGVA IN CASE OF INDIA (LRCTA → LRAGA)
This can be tested by using the three step procedure where first step is to test the stationarity of LRCTA and LRAGVA series, the second step is to test for co-integration of LRCTA and LRAGVA series, and the third step is to test for causality by using Error Correction Model (ECM). Residual tests are the supplement to third step which are performed to establish the authenticity of the model used.

1. **Testing for Stationarity of LRCTA and LRAGVA Series:** ADF, PP and KPSS tests are applied to know the level of stationarity of both the series. The results obtained are tabulated below which clearly indicate that both the series are integrated at I (1) i.e. they become stationary after first difference.

Table–3: Results of Unit Root Tests of LRCTA and LRAGVA series of India

LRCTA Series		LRAGVA Series	
Test	Conclusion @5%	Test	Conclusion @5%
ADF Test	LRCTA is I(1)	ADF Test	RCTA is I(1)
PP Test	LRCTA is I(1)	PP Test	RCTA is I(1)
KPSS Test	LRCTA is I(1)	KPSS Test	RCTA is I(1)
Conclusion: LRCTA is I(1)		*Conclusion:* RAGVA is I(1)	

2. **Testing for Co-integration of LRCTA and LRAGVA Series:** As both the series are of order I (1), Johansen co-integration test is performed to know whether there exists any long run equilibrium between LRCTA and LRAGVA or not. Johansen co-integration test gives output in terms of two tests i.e. (1) Trace test and (2) Maximum Eigen values test. The results obtained are tabulated below for an optimal lag of 4.

Table–4: Unrestricted Co-integration Rank Test (Trace) for India

Hypothesized No. of CE(s)	Eigen Value	Trace Statistic	0.05 Critical Value	Prob.
None	0.8055	35.23	15.49	0.0000
At most 1	0.5848	12.30	3.84	0.0005
Conclusion: Trace Test indicates 2 co-integrating equations @ 5% level				

Table–5: Unrestricted Co-integration Rank Test (Maximum Eigen Values) for India

Hypothesized No. of CE(s)	Eigen Value	Max Eigen Statistic	0.05 Critical Value	Prob.
None	0.8055	22.92	14.26	0.0017
At most 1	0.5848	12.30	3.84	0.0005
Conclusion: Max Eigen Values Test indicates 2 co-integrating equations @ 5% level				

Both the tests indicate that there is co-integration between LRCTA and LRAGVA in case of India. Hence, it can be inferred that LRCTA and LRAGVA may have long run relationship. To cross check and confirm and to identify cause and effect relationship between the variables, ECM is used.

3. **Testing for Causality by using Error Correction Model (ECM):** Before applying it, it is to be verified that whether ECM is spurious or not. If $R^2 <$ DW Statistic, the model is non-spurious and can be used for further analysis. The results are given in table – 6 which show that $R^2 <$ DW statistic, thus, the model is non-spurious.

Table–6: Checking for Non-spuriousness of ECM

Dependent Variable: LRAGVA		
Variable	Coefficient	Probability
C	10.47	0.0000
LRCTA	0.108	0.0000
$R^2 = 0.66$		
DW Stat = 0.68		

Error Correction Model is applied to estimate the equation by taking DLRAGVA as dependent variable and DLRCTA as independent variable with DU as error correction term. The decision criteria is that the negative and significant (probability < 5%) coefficient of DU proves long run cause and effect relationship between the variables and significant and significant (probability < 5%) coefficient of DLRCTA proves short run causality between the two variables. The results of ECM are given below.

Table–7: Result of ECM

Dependent Variable = D(LRAGVA)		
Variable	Coefficient	Probability
C	- 1.31e – 17	0.58
DLRCTA	0.108	0.00
DU	1.00	0.00

From the table, the model has identified short run granger causality between DLRCTA and DLRAGVA in case of India. However, the model failed to identify long run granger causality between DLRCTA and DLRAGVA.

RESIDUAL DIAGNOSTIC TESTS
- **Serial Correlation:** Breusch – Godfrey Serial Correlation LM Test is applied to know whether the data is suffering from serial correlation or not. The output of the test is that observed $R^2 = 0.45$ and Prob $(\chi^2) = 0.1026$. As probability $(\chi^2) > 0.05$, there is no serial correlation in the data.

- **Normality:** Histogram normality test is applied to know whether the data is normally distributed normally or not. The output of the test is that Jarque – Bera = 0.88 and probability = 0.64. As the probability > 0.05, there exists normality in the data.

- **Heteroskedasticity:** Breusch – Pagan – Godfrey heteroskedasticity test is applied to know whether there exists unequal variance in the distribution of error term or not. The output of the test is that F- Stat = 0.32 and Probability of $F(2,15) = 0.72$. As the probability > 0.05, the data is free from heteroskedasticity.

TESTING CAUSALITY FROM LRAGVA TO LRCTA IN CASE OF INDIA (LRAGVA $\longrightarrow$ LRCTA)
This can be tested by using the same three step procedure as mentioned above. However, the results are same for the first, second and initial part of the third step i.e. both the series are of I(1) order, there are two co-integration equations, and the model is non-spurious as $R^2 <$ DW Statistic. Only the second part of the third step changes where ECM is applied to estimate equation by taking LRCTA as dependent variable and LRAGVA as independent variable. The results of ECM are tabulated below.

Table–8: Results of ECM

Dependent Variable = D(LRCTA)		
Variable	Coefficient	Probability
C	1.83e – 16	0.42
DLRAGVA	9.22	0.00
DU	-9.22	0.00

It is evident from the table that there exists short run granger causality from DLRAGVA to DLRCTA since the prob < 0.05 for DLRAGVA. Moreover, there exists long run granger causality from DLRAGVA to DLRCTA since DU coefficient is negative and significant i.e. its probability < 0.05.

RESIDUAL DIAGNOSTIC TESTS

- **Serial Correlation:** Breusch – Godfrey Serial Correlation LM Test has produced the result with prob (χ^2) = 0.23. As probability (χ^2) > 0.05, there is no serial correlation in the data.

- **Normality:** Histogram normality test found to have Jarque – Bera = 0.78 and probability = 0.67. As the probability > 0.05, there exists normality in the data.

- **Heteroskedasticity:** Breusch – Pagan – Godfrey heteroskedasticity test produced the output as F- Stat = 0.30 and probability of F (2, 15) = 0.74. As the probability > 0.05, the data is free from heteroskedasticity.

TESTING CAUSALITY IN CASE OF PAKISTAN

Causality can be tested in case of Islamic banking and finance country i.e. Pakistan in the same way. However, the choice of the techniques differs based on the level of integration of variables and existence or nonexistence of co-integration between the variables.

1. **Testing for Stationarity of Pakistan's LRCTA and LRAGVA Series:** ADF, PP and KPSS tests are applied to know the level of stationarity of both the series. The results obtained are tabulated below which clearly indicate that LRCTA is of order I(2) and LRAGVA is of order I(1)i.e. they become stationary after second and first differences respectively.

Table–9: Results of Unit Root Tests of LRCTA and LRAGVA series of Pakistan

LRCTA Series		LRAGVA Series	
Test	**Conclusion @5%**	**Test**	**Conclusion @5%**
ADF Test	LRCTA is I(2)	ADF Test	RCTA is I(1)
PP Test	LRCTA is I(2)	PP Test	RCTA is I(1)
KPSS Test	LRCTA is I(1)	KPSS Test	RCTA is I(1)
Conclusion: LRCTA is I(2)		*Conclusion:* LRAGVA is I(1)	

As the variables are of different order, Johansen co-integration test can't be used. In this case, either Autoregressive models or Toda and Yamamoto test can be used to test the causality. In this paper, Toda and Yamamoto model is applied to know the causality between LRCTA and LRAGVA series of Pakistan.

2. Toda and Yamamoto Model of Causality

Toda and Yamamoto (1995) propose an interesting yet simple procedure requiring the estimation of an augmented VAR which guarantees the asymptotic distribution of the Wald statistic (an asymptotic χ^2-distribution). Two steps are involved in applying this procedure. First step involves finding d_{max} i.e. maximum order of integration among the variables and optimal lag length (*m*). Maximum order is 2 for this model as highest order is I(2) for LRCTA series. To apply Toda and Yamamoto model, optimal lag must be greater than d_{max}. The second step is to apply VAR Granger Causality / Block Erogeneity Wald Test to trace out the causality.

2.1. Determination of Optimal Lag

Different lag length criteria are selected to find out the optimal lag. When the lag length criteria selected is 4, the optimal lag of the model is 4 as per FPE, AIC and HQ criteria as tabulated below.

Table–10: Optimal Lag Length Selection

Lag	LogL	LR	FPE	AIC	SIC	HQ
0	57.86	NA	4.80e-06	-6.57	-6.47	-6.56
1	76.12	30.08*	9.02e-07	-8.25	-7.95*	-8.22
2		5.12	9.62e-07	-8.21	-7.72	-8.16
3	79.82	4.98	1.00e-06	-8.24	-7.55	-8.17
4	84.06	6.58	8.06e-07*	-8.59*	-7.71	-8.50*
	91.05					

(*indicates lag order selected by the criterion)

2.2. The VAR Granger Causality / Block Exogeneity Wald Test

This test is applied to know the causality. As the optimal lag is 4, and d_{max} = 2, model equation is estimated with 4 lags plus another 2 extra lags of d_{max}. The results are given below.

Table–11: VAR Granger Causality / Block Exogeneity Wald Test

Dependent Variable: LRAGVA				Dependent Variable: LRCTA			
Excluded	χ^2	dof	Prob.	Excluded	χ^2	dof	Prob.
LRCTA	20.49	4	0.0004	LRAGVA	26.45	4	0.0000
All	20.49	4	0.0004	All	26.45	4	0.0000

As the probability of LRCTA < 5%, LRCTA granger causes LRAGVA in case of Pakistan. Similarly, the probability of LRAGVA < 5%, LRAGVA granger causes LRCTA. It means there is bidirectional causality between LRCTA and LRAGVA in case of Pakistan.

RESIDUAL DIAGNOSTIC TESTS
- **Normality:** The data is diagnosed to know whether it is distributed normally or not. Skewness, Kurtosis and Jarque – Bera are computed to assess the normality. When the joint probability is greater than 0.05, it is inferred that the distribution is normal. All the joint probabilities are > 0.05, the data is normally distributed.

Table-12: VAR Residual Normality Tests with Cholesky (Lutkepohl) Orthogonalization

Component	Skewness	χ^2	dof	Prob.
1	-0.37	0.34	1	0.55
2	-0.34	0.30	1	0.58
Joint		0.64	2	**0.72**

Component	Kurtosis	χ^2	dof	Prob.
1	2.77	0.03	1	0.86
2	2.00	0.62	1	0.42
Joint		0.65	2	**0.72**

Component	Jarque – Bera	dof	Prob.
1	0.37	2	0.82
2	0.92	2	0.62
Joint		4	**0.86**

- **Serial Correlation:** VAR residual serial correlation LM test is used to test the existence of serial correlation in the data and the result shows that there is no serial correlation (probability > 5%) in the data up to 3 lags and there is a serial correlation with 4 lag (probability < 5%) of the variable and there is no serial correlation from fifth lag onwards.

Table-13: VAR Residual Serial Correlation LM Test

Lags	1	2	3	4	5	6	7	8	9	10
LM Stat	2.89	2.27	4.27	10.42	5.93	0.31	4.43	3.75	8.92	0.28
Prob.	0.57	0.68	0.36	**0.03**	0.20	0.98	0.35	0.43	0.06	0.99

(Probabilities are from χ^2 with 4 dof)

MAJOR FINDINGS
The findings of the study are given below.

- In case of India(Interest based banking system)

  1. In long run, DLRCTA does not ganger cause DLRAGVA but DLRAGVA granger causes DLRCTA i.e. there is unidirectional causality from DLRAGVA to DLRCTA

  2. In short run there is bidirectional causality between DLRCTA and DLRAGVA

- In case of Pakistan (Interest free Islamic banking system)

  1. There is bidirectional causality between DLRCTA and DLRAGVA as per Toda and Yamamoto model which doesn't distinguish between short and long runs and considers the both.

CONCLUSION
In this paper an attempt is made to know whether Islamic banking is relevant to Indian agriculture sector or not. The approach adopted is to assess whether agriculture credit causes agriculture gross value added or not. If it has not caused, the currently practiced banking and finance system is irrelevant in bringing long run causality. If the agriculture credit causes agriculture gross value added in case of Pakistan which is based on Islamic banking

and finance principles, then it is effective in bringing long run causality in Pakistan, hence assumed to relevant to India. In case of India, the study found that though there is short run bidirectional causality between credit to agriculture and agriculture gross value added; there is a unidirectional causality in long run from agriculture value added to agriculture credit. The most needed is the long run causality between credit to agriculture and agriculture gross value added, not proved in case of India. Pakistan has bidirectional causality between credit to agriculture and agriculture gross value added in long and short runs combined together. Hence, it is concluded that interest free Islamic banking is effective in bringing long run granger causality from CTA to AGVA, which interest based banking failed to establish in India. Thus, interest free Islamic banking is superior to conventional banking in bringing long run causality. Hence, Islamic banking is relevant to India in agriculture sector.

REFERENCES

- Dhananjay Mahapatra (2017), Over 12,000 farmer suicides per year, Centre tells Supreme Court, The Times of India, 03rd May 2017, retrieved from
  https://timesofindia.indiatimes.com/india/over-12000-farmer-suicides-per-year-centre-tells-supreme-court/articleshow/58486441.cms

- Dr. P. V. Deshmukh, 2011: Farmers Suicides in India, Indian Streams Research Journal, Vol. 1, Issue .1 / February 2011, pp. 113-117 retrieved from www.isrj.net/UploadedData/19.pdf

- Farmers' Suicides in India – Reasons and Responses, 30th September 2017, retrieved from https://www.clearias.com/farmers-suicides/

- India - An agricultural powerhouse of the world: Business Standard, 18th May 2016, retrieved from

  http://www.business-standard.com/article/b2b-connect/india-an-agricultural-powerhouse-of-the-world-116051800253_1.html

- Prominent personalities on Islamic Banking, 2010; Jamaat – e – Islami Hind, Tamil Nadu and Puducherry, retrieved from www.jihtn.org

- Santos R. Alimi and Chris C. Ofonyelu (2013), toda-yamamoto causality test between money market interest rate and expected inflation: the fisher hypothesis revisited, European Scientific Journal March 2013 edition vol.9, No.7, retrieved from
  https://eujournal.org/index.php/esj/article/download/859/902

- Sector-wise contribution of GDP of India, Ministry of Statistics and Programme Implementation, Government of India, retrieved from
  http://statisticstimes.com/economy/sectorwise-gdp-contribution-of-india.php

- T Anand (2017), Agriculture sector a must for GDP growth, The Hans India, 03 April 2017, retrieved from http://www.thehansindia.com/posts/index/Hans/2017-04-03/Agriculture-sector-a-must-for-GDP-growth/290889

TOURISM DEVELOPMENT IN SUNRISE ANDHRA PRADESH

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ABSTRACT

The Indian tourism and hospitality industry has emerged as one of the key drivers of growth among the services sector in India. Tourism in India has significant potential considering the rich cultural and historical heritage, variety in ecology, terrains and places of natural beauty spread across the country. It accounts for 9.6 per cent of the GDP and is the 3rd largest foreign exchange earner for the country, besides being a potentially large employment generator. Andhra Pradesh is strategically located on the south-eastern coast of India and is a natural gateway to East & South-East Asia. With the second longest coastline of 974 kilometers in the country, a rich historical and cultural heritage, ancient and spiritual temples, serene valleys and hills; the new state of Andhra Pradesh with 13 districts holds vast tourist potential, and offers multitude of theme based options to explore across its length and breadth. The present conceptual paper entitled "Tourism Development in Sunrise Andhra Pradesh" dwells on the potential of the residual, rather new state in attracting tourists from domestic and overseas locations. Various factors contributing to make Andhra Pradesh a Tourism Hub such as natural factors, political and leadership factors and the like are presented in the paper. The provisions of Tourism Policy of Sunrise Andhra Pradesh 2015 will be critically evaluated so as to bring out the unique and most innovative initiatives proposed and or taken by the government in making the dream a reality. The results of similar initiatives in other states in the country and other countries in world are being studied and assessed so as to make suggestions for effective accomplishment of the lofty goals.

Keywords: Sunrise Andhra Pradesh, Tourism Development, Tourism promotion and Tourism policy

INTRODUCTION

Tourism nowadays is one of the most popular ways of spending free time. It is highly developed in almost all countries, mainly because of socio-economic benefits it provides. Tourism is an important sector of the economy and contributes significantly in the country's GDP and Foreign Exchange Earnings. With its backward and forward linkages with other sectors of the economy, like transport, construction, handicraft, manufacturing, horticulture, agriculture, etc., tourism has the potential to not only be the economy driver, but also become an effective tool for poverty alleviation and ensuring growth with equity. A well-managed tourism program improves the quality of life as residents take advantage of the services and attractions tourism adds.

Andhra Pradesh is strategically located on the south-eastern coast of India and is a natural gateway to East & South-East Asia. Undivided Andhra Pradesh had the distinction of being a leading tourism destination in India and was the third most visited State in terms of domestic tourism in 2013, with the arrival of 152.1 million domestic tourists, which was about 13.3% of the total domestic tourism market. With the second longest coastline of 974 kilometers in the country, a rich historical and cultural heritage, ancient and spiritual temples, serene valleys and hills; the new state of Andhra Pradesh with 13 districts holds vast tourist potential, and offers multitude of theme based options to explore across its length and breadth.

Andhra Pradesh's competitive advantage lies in the area of religious tourism because its religious heritage and culture is considered unique. The prominent places of worship are spread across almost all the districts of Andhra Pradesh, attracting pilgrimage tourists throughout the year. The state has numerous Buddhist centres at Amaravati, Nagarjuna Konda, Bhattiprolu, Ghantasala and the like. Visakhapatnam has many beautiful beaches along the Bay of Bengal, and other beaches along coastal line include Mypadu beach in Nellore, Suryalanka Beach in Bapatla and manginapudi beach in Krishna district. The Borra Caves near Visakhapatnam are famous for million-year-old stalactite and stalagmite formations. The Belum Caves in Kurnool District have a length of 3,229 metres making them the second largest natural caves on the Indian subcontinent. Araku Valley is a hill station in Visakhapatnam district. The Anantagiri and Sunkarimetta Reserved Forest, which are part of Araku Valley, are rich in biodiversity. Horsley Hills in Chittoor district is a summer hill resort situated at an elevation of 1,265 metres and attracts lots of tourists.

Tourism department was striving to promote the state as the best tourist destination in the country with strong determination despite the hardships faced by it after the bifurcation. It was in fact, a proud moment for the State as the new state could push established internationally renowned tourist destinations like Rajasthan, Goa and Kerala to second and third place respectively. The State government was laying emphasis on promoting tourism projects and locations in all the 13 districts uniformly with good facilities. While AP stands third in

attracting domestic tourists, increased air connectivity, temple tourism and national and international events have made AP the hot spot not only for domestic tourists but for foreign tourists. Religious tourism continues to rule the roost in AP. However, experts cite that heritage spots too have emerged as a major attraction. While the Tirumala temple continues to attract chunk of tourists from across the country, Visakhapatnam and its surrounding areas are also gaining popularity among tourists from West Bengal and Odisha. This is due to reasonable packages offered in their leave travel allowances for destinations in AP. Vijayawada and Tirupati airports are accorded international airport status thus enhancing their prospects of being connected to many international destinations. New airports in Rajahmundry, Kadapa are being connected with various cities in the country under UDAN scheme which will provide tourists access to remote tourism destinations in the state

AP TOURISM POLICY 2015
Sunrise Andhra Pradesh now targets to be among the top 3 states in India by 2022 and a developed state by 2029. The State provides an amalgamation of factors conducive to high growth and accelerated development, such as strong infrastructure, highly talented technical manpower, enterprising population and dynamic leadership. As part of its Tourism Mission strategy, the State offers nine major Tourism themes: 1) Beach & Water-based 2) Eco-tourism 3) Buddhist 4) Religious 5) Heritage 6) Meetings, Incentives, Conferences, and Exhibitions (MICE)& Infrastructure development 7) Recreation/Adventure 8) Spiritual/Wellness 9) Medical These nine major themes are further categorized into 42 sub-themes.

- **Vision**

To develop Andhra Pradesh as one of the most preferred tourist destinations through sustained investments, robust Tourism Infrastructure projects & services, and provide world-class diverse tourist experience

- **Policy objectives**

a) To position Andhra Pradesh as a globally recognized tourism destination

b) To become the most preferred choice for tourism investments in the country

c) To enable tourism sector to become a significant employment generator

d) To deli*v*er world-class experiences by offering unique and diverse Tourism Infrastructure Projects and Services

e) To nurture and sustain the rich culture, heritage and environment of the State

- **Policy targets**

a) To be the most preferred State in India for domestic tourist arrivals, and among top 12 states for international tourist arrivals

b) To facilitate investments in the tourism sector to the tune of Rs 10,000 crore and contribute 8% to the State GDP by 2020

c) To facilitate creation of 5 lakh additional jobs in the tourism sector

Tourism Policy 2015-20 offers incentives such as capital subsidy (for tourism services only), concessional power tariffs, SGST reimbursement, complementary infrastructure etc. to 12 types of tourism infrastructure projects and 20 types of tourism services.

TOURISM PROMOTION IN AP OTHER STATES
In any business activity, promotion makes huge difference in realizing the goals and objectives of the business. As various states in the country currently are in the race to position their state as the preferred choice for investments, events, establishing institutions of importance and excellence, effective and systematic promotion assumes greater significance than ever before. Government of Andhra Pradesh (GoAP) realized that there is a need to position Andhra Pradesh as a preferred tourist destination across the globe through effective marketing and promotion to align with the influx of investments for tourism Infrastructure project and tourism services in the state. The government has been pursuing the following initiatives to build a strong brand to attract local, domestic and international tourists:

- Develop Mega Brand campaigns to attract tourists and major tourism investments in the State through a focused marketing & promotion strategy via conventional and digital/social media channels

- Prioritize top 5 countries/ states where aggressive marketing is required to attract maximum investors and tourist arrivals.

- Develop 'APEX' – Andhra Pradesh Expert program for inbound tour & travel operators to identify, train, license and develop tour& travel operators to be well-versed with Andhra Pradesh tourism and act as focal points for attracting tourist arrivals in the state

- Organize familiarization tours of national and international tour operators, travel writers and photographers in Andhra Pradesh

- Facilitate participation of tourism investors/entrepreneurs investing in Tourism Infrastructure Projects and Tourism Services in Andhra Pradesh at renowned national / international events / exhibitions to promote the State and Tourism unit(s)

- The State planned 24 mega events to create buzz about AP tourism, culture, crafts within and outside the State.

The closer scrutiny of the tourism policies of neighboring states such as Tamilnadu, Kerala and Karnataka have increasingly been focusing on tourism sector, and coming out with appropriate policies for attracting tourists and investments in tourism sector from domestic and international sources. Publicity and Marketing campaigns are gaining more currency than before to strongly position each state as a preferred tourist destination by the respective governments.

Government of Tamilnadu conducts Publicity and Marketing Campaigns regularly to attract more tourists to visit Tamilnadu and to maintain the top ranking obtained by Tamilnadu Tourism during 2014. During 2014-15, publicity and marketing campaigns were conducted at Jaipur, New Delhi, Mumbai, Aurangabad and Bhopal. World class guide training programs for 60 Guides was conducted by tourism department in co-ordination with Entrepreneurship Development Institute (EDI), Chennai and Centre for Entrepreneurship Development (CED), Madurai. Initiatives towards Capacity Building for service providers go a long way in achieving and sustaining higher rates of growth in tourism sector.

Similarly Kerala government strives hard to attract more of domestic and international tourists. It has identified the markets like USA, Scandinavia, Russia, China, South Africa, Middle East and Malaysia to be having tremendous potential among the emerging markets for Kerala, and has decided to spread its marketing efforts to make tourist destinations visible in the above markets. Kerala Convention Promotion Bureau (KCPB) with participation of the tourism industry, to market the region aggressively in the MICE business segment. The government also resolved to strengthen the database and market research by incorporating collection of detailed tourist profile with the support of tourist accommodation providers. Separate market research will be conducted by the Department to identify the necessity of direct air connectivity from major source markets to Kerala. The tourism department will make maximum use of social marketing tools for effective promotion of Kerala Tourism. Product-Market Seasonality Matrix will be developed by the department to match products to main markets and indicate main seasonality factors so that Kerala can become an all season destination.

The new tourism policy of government of Karnataka aims to set a road map to accelerate and facilitate private investments and promoting entrepreneurship in the tourism sector. Under the Tourism Policy 2015-20, about 18 innovative tourism products, such as Hotels and Resorts, Caravan Parks, Museums & Galleries, Eco Tourism project, Rural Tourism Project, Agri Tourism, Cruise Tourism, Adventure Tourism, Entertainment Park, Way side Amenity, Yatri Nivas, Dormitories/Youth Hostel, Wellness/Holistic Health Centre, Tourist Interpretation Centre, Tourist Information Center, Kiosks, Vocational Training Institutes (Training and HRD) and Homestays have been identified. Government of Karnataka has launched an "Adopt a Tourism Destination" scheme, wherein, Corporates will finance the activities, operations and maintain the facilities at these tourist destinations as a part of their CSR activities on their own rather than transferring the funds to any Government body/department. Department has initially identified 46 destinations for providing such facilities by the Corporate Sector.

The government of Gujarat in western India unveiled its tourism policy 2015-20 with a focus to propel growth to new heights. As part of new policy, the government provides incentives for the development of tourism infrastructure in the state in the form of subsidies, concessions, tax exemptions, reimbursement of expenses/ taxes, special packages for tourism development and the like. The incentives are provided for promotion of innovation, market support, skill development, ICT development, research in tourism and hospitality industry and the like. The wonders promotional campaigns and celebrity endorsement did for Gujarat tourism prompt other states to design effective promotional campaigns for their own states.

GROWTH IN AP TOURISM
Positioning of the state as Sunrise state evokes positive response from the stakeholders and works as a strong USP. The present government seems to be able to build that confidence, which could be witnessed from the quantum of investments flown to the tourism sector in the recently held CII- Partnership Summit at Visakhapatnam. The major investment proposals include Rs.2,500 crore by Ivory Sands, which specialises in

service apartments and hotels, and Rs. 240 crore by Intel Globe, an air transport firm. In 2014 to 165 million in 2017. Top tourist destinations in the state are Tirupati/Tirumala and Visakhapatnam. The following figures F1, F2 and F3 provide an overview of growth in domestic arrivals, foreign arrivals and contribution of Tourism sector to GSDP of AP:
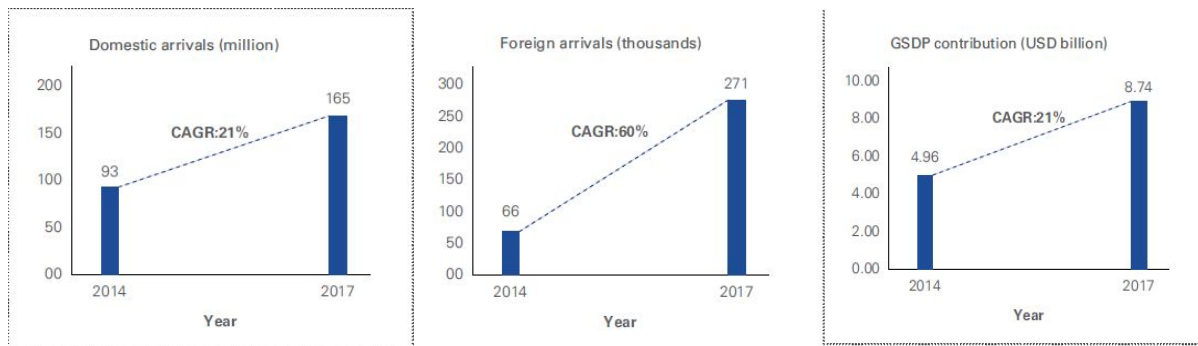
45 MOUS IN TWO YEARS

In the last two years, tourism sector entered into 45 MoUs worth ₹10,300 crore and more than half of them were grounded. Under Ease of Doing Business, Tourism department is part of single-window system for processing proposals faster along with the Industry Department. The State is third in the country with 15 crore domestic tourist footfalls and is growing at 15%. This requires massive expansion of hotel rooms, resorts, wayside amenities and skilled personnel. Recently concluded Godavari and Krishna pushkaralu provided great opportunity for the government to showcase its abilities in attracting and coping with such large influx of tourists.

- About 50 projects worth Rs 10,000 crore (USD1.52 billion) and employment potential of 50,000 are in various stages of development. Rs 3,380 crore (USD520 million) tourism investments grounded.

- Best National Tourism award 2017 by GoI

- Best new hot spot destination 2017, at ITB Berlin

- Number of rooms available (3-star and above) in the state have gone from about 6,000 in 2014 to 9,500 (projected) in FY2017-1823

- Many innovative events such as Godavari Dance and Lantern, Sounds on Sand, Amaravati Theatre Festival, Social Media Awards, Araku Balloon Festival, etc. Development of new Buddhist, heritage, ecotourism circuits

MAJOR TOURISM DEVELOPMENT INITIATIVES IN THE RECENT PAST

The government has been unveiling several policy measures to boost tourism sector in the state. Some specific initiatives are briefly outlined as under:

- **Theme park**

The State Government proposes to allot 240 acre site in Madhurawada in Visakhapatnam to be developed as a resort and theme park on the lines of Genting Highlands in Malaysia. The other major projects are development of Bhavani Islands, village tourism, development of 39 beach locations, jetties near ports as tourist spots. An idea was mooted for setting up headquarters of Tourism Finance Corporation for South India at Vijayawada to finance tourism projects exclusively.

- **Beach-front tourism**

The proposed 1,000-km road along the beach would open up the beach- front tourism. The steps were also being initiated to create an additional 5 lakh jobs in the department.

- **MICE driven Tourism**

MICE-driven tourism is set to get a big boost in Andhra Pradesh as the Tourism Department has come up with a proposal to develop three major Family Entertainment Centres (FECs) in Visakhapatnam, Tirupati and Vijayawada. The FECs will be developed under the public-private partnership (PPP) initiative at a cost of over Rs 80 crore each. Each FEC will be a MICE (Meetings, Incentives, Conventions and Events) hub as well, mixing business with entertainment, and, thus, AP will be the first state to have three such major facilities. While port city Visakhapatnam and temple town Tirupati are already established tourist destinations, Vijayawada, now part of the AP capital region Amaravati, is also emerging as an important hub for travellers.

An iMax screen, six-screen multiplex with a total of 2500 seats, 80,000 sq ft shopping mall, three-star hotel and a 2,000-seater convention centre will form part of each FEC. In 2016-17, more than 15.82 crore tourists arrived in AP, contributing a revenue of Rs 50,624 crore to the Gross State Domestic Product (GSDP), official figures revealed. During April-November 2017-18, more than 10.6 crore tourist arrivals were recorded and the number is expected to go up to 16.76 crore by the end of the fiscal year, with a projected GSDP contribution of over Rs 56,000 crore.

- **Governance of Tourism sector**

Governance of Tourism sector in the state is streamlined through integration of tourism, heritage and culture departments as Andhra Pradesh Tourism, Culture and Heritage Board headed by Hon'ble Chief Minister of Andhra Pradesh, Chandrababu Naidu. This provides greater autonomy and greater authority for fast-tracking tourism sector development in the state.

- Skilled manpower in various aspects of tourism are engaged to drive holistic development of tourism sector

- Land Lease Policy 2015-20 for tourism projects is in force. It offers government land at a lease rate of 2 per cent of market value (lowest in the country)

- Clearances through Single Desk Portal are provided within 21 days

- Upgradation of existing hotels and other facilities owned by the Andhra Pradesh Tourism Development Corporation through PPP model

- Major tourism hubs being developed across the state

- Greater focus on integration of Information Technology into tourism services for improving tourist. World Travel and Tourism Council recognised the policy with 'Policy Leadership' award in 2015.

- Integrated beach tourism master plan to explore 974 kms of coastline and to promote coastal tourism

- Development of new tourism destinations such as Polvaram, Orvakal, Gandikota, Konaseema etc.

- Promoting village tourism, an emerging concept of rural homestays to promote culture and heritage of the state

- Developing TU 142, INS Viraat and Havelock bridge into heritage tourism attractions

- Creation of tourism infrastructure at existing and new tourism destinations. This may be in the form of star hotels, homestays, wayside amenities, services etc.

- Upgradation of tourism infrastructure through PPP model

- Standardisation of tourism services across the state along with geo-tagging of all tourist amenities in the state.

Andhra Pradesh government will soon be announcing a more investor-friendly tourism policy by making certain changes to the 2015-20 policy announced two years ago to make execution of projects speedy and attractive for investors. The proposed changes in the policy are likely to throw light on issues related to land allocation and its high cost, lease rents, incentives for smooth and speedy implementation of tourism infrastructure development projects in all the 13 districts.

CHALLENGES AND THE WAY AHEAD FOR SUNRISE ANDHRA PRADESH

The fund-starved residual, rather new state of Andhra Pradesh has unique challenges to cope with in its endeavor to turn Andhra Pradesh as a Tourism hub. Andhra Pradesh has tremendous potential to become one of the foremost states in the tourism map of the country. Practically everything that people who visit India to see and experience can be seen and experienced in Andhra Pradesh alone. It is not an exaggeration to say that Andhra Pradesh is the essence of Incredible India. Andhra Pradesh bagged Union Tourism Ministry's top award under comprehensive tourism development programme. Though the influx of domestic and foreign holiday-makers to AP has been increasing every year, lack of adequate tourism infrastructure is seen as a dampener. Necessary tourism infrastructure has to be built substantially with the private investment, which largely depends on diverse economic and political factors.

REFERENCES

- http://apfootfall.viswagnan.com/web/index.php?r=yearchart%2Findex&dtId=0&pl=0&to=0&de=0&ho=0#

- http://aptourism.gov.in/index.php/more/tourism-policy.html

- http://shodhganga.inflibnet.ac.in/bitstream/10603/37439/9/09_chapter_3.pdf

- http://worldwidejournals.com/gra/file.php?val=July_2012_1342416072_36eab_File%2018.pdf

- http://worldwidejournals.com/gra/file.php?val=July_2012_1342416104_36eab_File%2019.pdf

- http://www.business-standard.com/article/pti-stories/mice-driven-tourism-set-to-get-a-big-boost-in-andhra-pradesh-118020400096_1.html

- http://www.efymag.com/admin/issuepdf/Tourism%20in%20Gujarat_FFY%20March-13.pdf

- http://www.tamilnadutourism.org/pdf/tour_e_pn_2014_15.pdf

- http://www.thehindu.com/news/cities/Hyderabad/andhra-pradesh-woos-investors-with-attractive-tourism-policy/article19984055.ece

- http://www.thehindu.com/news/national/andhra-pradesh/sunrise-state-is-usp-of-navya-andhra-pradesh/article8052209.ece

- https://timesofindia.indiatimes.com/city/hyderabad/tourists-go-in-droves-to-ap-but-its-trickle-in-telangana/articleshow/58471415.cms

- https://www.keralatourism.org/tourism-policy-2012-english.pdf

- Krishnaiah Pujari, Andhra Pradesh Tourism – A SWOT analysis, Asian Journal of Research in Social Sciences and Humanities, 2012, Volume: 2, Issue: 4, pp: 120-137, Online ISSN: 2249-7315

- Report of The Working Group on Tourism 12th Five Year Plan (2012- 17) Ministry of Tourism Government Of India, 2011

A STUDY OF ORGANIZATIONAL CULTURE AT MAC VEHICLES PVT. LTD. USING OCTAPACE MODEL

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ABSTRACT

Organization culture includes an organization's expectation , philosophy, and values that hold it together, and it expressed to itself image, workings, interactions with the outside world and future expectations. It is based on shared attitudes, beliefs, customs and written and unwritten rules that have been developed over time and consider valid also called as corporate culture.

This paper focuses on the Organizational culture of an organization and its impact on the work culture and on employees. This research was a part of the project done at mac vehicles Pvt. Ltd. This paper throws light of the importance of healthy work culture using the OCTAPACE model.

Keywords: Organizational Culture, OCTAPACE, Employee Productivity, Congruence Model, values.

1. INTRODUCTION

Organizational culture is the behavior of human, who are part of an organization and the meanings that the people attach to their actions. Culture includes the organization values, visions, norms, working language, systems, symbols, beliefs and habits. It is also the pattern of such collective behaviors and assumptions that are taught to new organizational employees as a way of perceiving, even thinking and feelings. Organizational culture affects the way people and groups interact with each other, with clients, and with stakeholders.

Employees' Productivity and Organizational culture are closely related. Nowadays organization's culture is as an effective factor on organizations actions. Simply stated, productivity is the art of getting the company's products and/or services to the customer at the lowest possible cost. But it is more than that - it is related to all over organization culture. In other words, employees' productivity and good organization culture are inseparable. Culture in organization is like a personality of a human. Organizational culture refers to the common beliefs and values that are present in the organization which guides the behavior of employees Organization behavior is usually consider to be a soft concept but still it is a very strong and reliable culture. Organizational culture to a great extend influences the behavior of employees in the work place.

Employee's Productivity is a result of motivation, and motivation thrives in a good climate. With the powerful and relative culture, people will be more responsible and satisfied beside the more objective and organization strategies and it will be beside the better motivation and organization actions and staff. High culture is power which will direct people and will organize their goals and create more motivation in employee so that some of researchers there is the most effective motivation in the world and this will be the factor for improving of their job.

Employees are the basic building blocks of an organization. The victory and development of an organization depends on how effectively and efficiently does it employee performs and culture is a means through which employees discover and correspond what is suitable or undesirable in an organization in the light of values and norms. Culture can be found in any organization, no matter how small or large the organization could be. Organization culture can be how management relates to its employees, were communication is open or closed or if employees are given autonomy or recognition for their achievements. It sets a framework within which individual and group behavior takes place. Organization culture match what the individual needs to be successful in a particular work environment. Organizational culture is the vital aspect of successful organization. There must be a positive culture to attract and retain loyal and committed employees, which, in turn, can strengthen relationships with customers and other partners. Just like any other asset, organizational culture must be monitored and nurtured to ensure that it reflects the organization and its vision.

Gibson et al (1997) defined organizational culture as the system that penetrates values, belief and norms in each organization. Organizational culture able encourage and discourage the effectiveness depend on the value characteristic, belief, and norms. Schein (1992), organizational culture is basic assumption pattern that is created, found, or developed by certain group when they adapting themselves with the external problems and internal integration work well and considered as worth, and taught to new members the correct way to realize, think, and feel the relation with the problems. And Robbins (2006), organizational culture is collective meaning system that are followed by the members that differentiate the organization to others.

A norm is an established behavior pattern that is part of a culture.

A number of organization culture types have been identified by researchers.

IMPORTANCE OF CULTURE IN ORGANIZATION

Every organization has its own culture. Since many employees spend 40 or more hours at their workplace, their organization's culture obviously affects both their work lives as well as their personal lives. Organizational culture refers to the beliefs, ideologies, principles and values that the individuals of an organization share. This culture is a determining factor in the success of the organization.

Unity

A shared organizational culture helps to unite employees of different demographics. Many employees within an organization come from different backgrounds, families and traditions and have their own cultures. Having a shared culture at the workplace gives them a sense of unity and understanding towards one another, promoting better communication and less conflict. In addition, a shared organizational culture promotes equality by ensuring no employee is neglected at the workplace and that each is treated equally.

Loyalty

Organizational culture helps to keep employees motivated and loyal to the management of the organization. If employees view themselves as part of their organization's culture, they are more eager to want to contribute to the entity's success. They feel a higher sense of accomplishment for being a part of an organization they care about and work harder without having to be coerced.

Competition

Healthy competition among employees is one of the results of a shared organizational culture. Employees will strive to perform at their best to earn recognition and appreciation from their superiors. This in turn increases the quality of their work, which helps the organization prosper and flourish.

Direction

Guidelines contribute to organizational culture. They provide employees with a sense of direction and expectations that keep employees on task. Each employee understands what his roles and responsibilities are and how to accomplish tasks prior to established deadlines.

Identity

An organization's culture defines its identity. An entity's way of doing business is perceived by both the individuals who comprise the organization as well as its clients and customers, and it is determined by its culture. The values and beliefs of an organization contribute to the brand image by which it becomes known and respected.

1. CONCEPTUAL FRAMEWORK

When we walk into an organization we often get a 'feeling' about it; whether it feels fast moving and responsive, or old and backward looking, this 'feeling' is referred to as the 'Organization Culture'. Culture is about how a firm organizes itself; rules, procedures and beliefs make up the culture of a company.

Handy's Four Types of Organizational Cultures

This model of culture, popularized by Charles Handy (1999)- and following work by Harrison (1972)- also presents organizational cultures as classified into four major types: the power culture, the role culture, the task culture, and the person or support culture. Handy's approach may help to understand why you have been more comfortable in some organizations than others. Interestingly, although Handy chooses to talk about culture, he shows the structures associated with his culture types. This may be because of the difficulty of drawing something as diffuse as culture, but it also reinforces the fact that culture and structure are interrelated.

1. Power Culture

There are some organizations where the power remains in the hands of only few people and only they are authorized to take decisions. They are the ones who enjoy special privileges at the workplace. They are the most important people at the workplace and are the major decision makers. These individuals further delegate responsibilities to the other employees. In such a culture the subordinates have no option but to strictly follow their superior's instructions. The employees do not have the liberty to express their views or share their ideas on an open forum and have to follow what their superior says. The managers in such a type of culture sometimes can be partial to someone or the other leading to major unrest among others.

2. Task Culture

Organizations where teams are formed to achieve the targets or solve critical problems follow the task culture. In such organizations individuals with common interests and specializations come together to form a team. There are generally four to five members in each team. In such a culture every team member has to contribute equally and accomplish tasks in the most innovative way.

3. Person Culture

There are certain organizations where the employees feel that they are more important than their organization. Such organizations follow a culture known as person culture. In a person culture, individuals are more concerned about their own self rather than the organization. The organization in such a culture takes a back seat and eventually suffers. Employees just come to the office for the sake of money and never get attached to it. They are seldom loyal towards the management and never decide in favor of the organization. One should always remember that organization comes first and everything else later.

4. Role culture

Role culture is a culture where every employee is delegated roles and responsibilities according to his specialization, educational qualification and interest to extract the best out of him. In such a culture employees decide what best they can do and willingly accept the challenge. Every individual is accountable for something or the other and has to take ownership of the work assigned to him. Power comes with responsibility in such a work culture.

DIMENSIONS OF NATIONAL CULTURES (HOFSTEDE MODEL)
Hofstede model of culture contains following points

1. Power Distance Index (PDI)

"Power distance is the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally." Cultures that endorse low power distance expect and accept power relations that are more consultative or democratic.

2. Individualism (IDV) vs. collectivism

"The degree to which individuals are integrated into groups". In individualistic societies, the stress is put on personal achievements and individual rights. People are expected to stand up for themselves and their immediate family, and to choose their own affiliations. In contrast, in collectivist societies, individuals act prominently as members of a lifelong and cohesive group or organization(note: "The word collectivism in this sense has no political meaning: it refers to the group, not the state"). People have large extended families, which are used as protection in exchange for unquestioning loyalty.

3. Uncertainty avoidance Index(UAI)

"A society's tolerance for uncertainty and ambiguity". It reflects extends to which members of the society attempt to cope with anxiety by minimizing uncertainty. People in cultures with high uncertainty avoidance tend to be more emotional. They try to minimizes high occurrences of unknown and unusual circumstances and to proceed with careful changes step by step planning and by implementing rules, laws and regulations. In contrast, low uncertainty avoidance cultures accepts and feel comfortable in unstructured situations or changeable environments and try to have as few rules as possible. People in these cultures tend to be pragmatic, they are more tolerant of change.

4. Masculinity (MASC) vs. Femininity

"A distribution of emotional roles between the genders". A situation in which the dominant values are success money and professions as opposed to the situation in which the dominant values are caring for others and the quality of life.

Culture change involves moving an organization on from one form of culture to another, usually through a culture change program. Culture guides the way individuals and groups in an organization interact with one another and with parties outside it. It is the premier competitive advantage of high-performance organizations. Sadly, for others, organizational culture is the most difficult attribute to change: it outlives founders, leaders, managers, products, services, and well-nigh the rest. It is best improved by organizational learning for change.

THE CONGRUENCE MODEL

The congruence model is based on the principle that an organization's performance is derived from four elements: task, people, structure, and culture. The higher the congruence, or compatibility, amongst these elements, the grater the performance.For example, if you have brilliant people working for you, but your organization's culture is not a good fit for the way theywork, their brilliance will not shine through. Likewise, you can have the latest technology and superbly streamlined processes to support decision making, but if the organizational culture is highly bureaucratic, decision will undoubtedly still get caught in the quagmire.

To avoid this type of congruency, the congruency model offers a systematic way to consider the root elements that drive organizational performance. The following diagram shows how the four critical elements relate to strategy and performance.
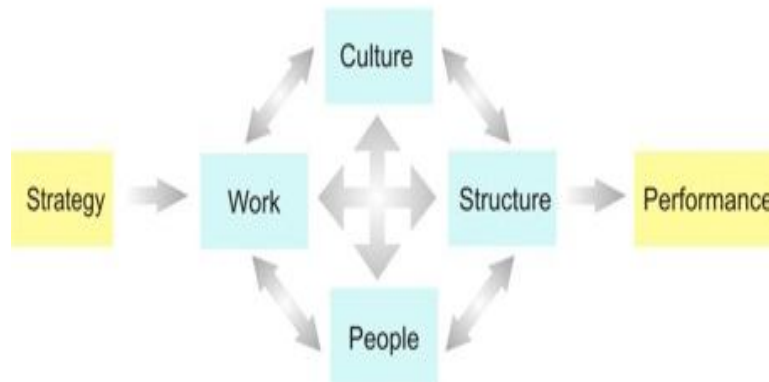
Culture often becomes the focus of attention during periods of organizational change- when companies merge and their culture clash, for example, or when growth and other strategic change mean that the existing culture becomes inappropriate, and hinders rather than supports progress. In more static environments, cultural issues may be responsible for low morale, absenteeism or high staff turnover, with all of the adverse effects those can have on productivity.

So for all its elusiveness, corporate culture can have a huge impact on an organization's work environment and output. This is why so much research has been done to pinpoint exactly what makes an effective corporate culture, and hoe to go about changing culture that isn't working.

CULTURAL WEB

The Cultural Web defines six interrelated elements that help to make up what Johanson and Scholes call the "paradigm"- the pattern or model- of work environment. By analyzing factors in each you can begin to see the bigger picture of your culture: what is working, what isn't working, and what needs to be changed.
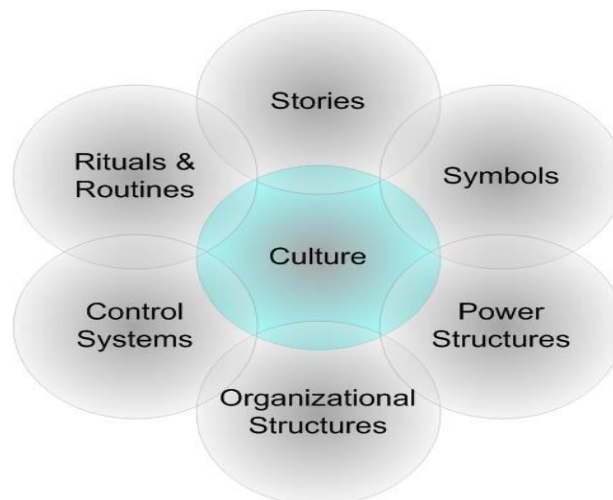
The six elements are

1. Stories- The past events and people talked about inside and outside the company. Who and what the company choose to immortalize says a great deal about what it values, and perceives as a great behavior.

2. Rituals and Routines- The daily behavior and actions of people that signal acceptable behavior. This determines what is expected to happen in given situations, and what is valued by management.

3. Symbols- The visual representation of the company including the logos, how plush the offices are, and the formal or informal dress codes.

4. Organization Structure- This includes both the structure defines by organization chart, and the unwritten lines of power and influence that indicate whose contributions are most valued.

5. Control System- The ways that organization is controlled. These include financial systems, quality systems, and rewards(including the way they are measured and distributed within the organization)

6. Power Structure- The pocket or the real power of the company. This may involve one or two key senior executives, a whole group of executives, or a department. The key is that these people have the greatest amount of influence on decisions operations, and strategic direction.

OCTAPACE CULTURE- UDAI PAREEK

Organizational culture includes ethics, values, beliefs, attitudes, norms, ethos, climate, environment, and culture. According to Udai Pareek, the Culture-related concepts also can be seen as multilevel concepts. At the core (first level) are the values, which give a distinct identity to a group. This is the basic ethos of the group. Pareek defines ethos as "Underlying spirit of character or group and is the root of culture". The second level concept is "climate", which can be defined as the perceived attributes of an organization and its members, groups and issues. The third level concept relates to "atmosphere", which is the distinct factor that affects the development of someone or something.

EIGHT DIMENSIONS OF OCTAPACE

The eight dimensions of OCTAPACE culture are Openness, Confrontation, Trust, Authenticity, Pro-action, Autonomy, Collaboration, and Experimentation which are essential for a strong and successful organization. A culture with OCTAPACE values has the greater chance of achieving high involvement and satisfaction, team work, growth and free flow of communication within the organization.
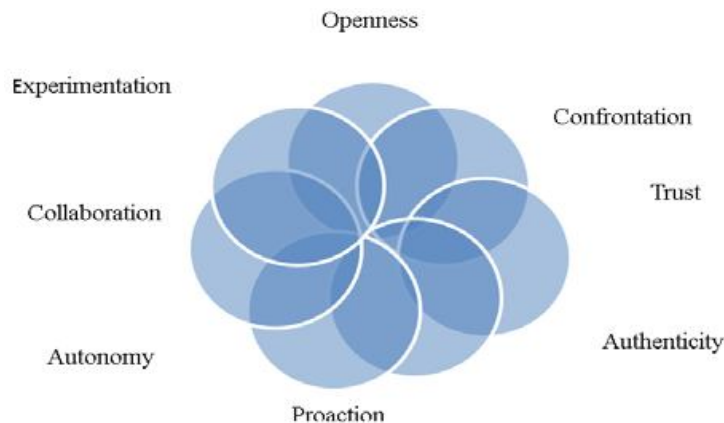
- **O-Openness–** Freedom to communicate, share and interact without hesitation.

- **C-Confrontation-** Facing the problems, challenges boldly and not shying away.

- **T-Trust-** Maintaining the confidentiality of information shared by others and company.   A- Authenticity- Congruence between what one feels and says.

- **P-Pro action -** Taking initiative, preplanning and taking preventive action.

- **A-Autonomy-** Using and giving freedom to plan and act in one's own sphere.

- **C-Collaboration-** Giving help to and accepting help from others in team.

- **E-Experimentation-** Using and encouraging innovative approaches to solve problems.

In this 40 items instruments are gives the profile of organization ethos. This was used in our project.

3. REVIEW OF LITERATURE

Organizational culture has assumed considerable importance in the 21st century, because of its impact on employee performance and job satisfaction. It is the imperative of every organization to understand its own dynamic culture so that managers can capitalize on the insights generated by the cultural perspective to wield greater control over their organizations.

According to Judge & Ferris (1993), perhaps there is no human resources system moreimportant in companies other than performance evaluation and the ratings of employees'performance represent critical decisions that highly influence a variety of subsequent human resources actions and outcomes.

Srivastav S. K and Srivastava. P (2004) described the initiative of successful TPM implementation in a continuous process firm and its effect on firm performance. It reveals that OCTAPACE culture implementation increases the performance of the company.

A study was conducted by Feza Tabassum Azmi and Richa Sharma (2007) on comparing the organizational culture of companies in the IT and Banking sectors in India using OCTAPACE profile. The result suggests that the mean score of IT companies on "openness", "proaction", and "experimentation" have higher values, where as the banking sectors have high on rest of them.It is also stated that organization within an industry has similar cultural values.

Rijal, Sapna (2010)this study proposeshypotheses to understand the impact oftransformational leadership andorganizational culture on the development oflearning organizations. This comparativestudy designed to compares selectedorganizations in the pharmaceutical sectorbetween Nepal and India. The industrychosen for the study because improvingorganizational performances throughlearning has been a critical factor forcompany survival due to industry's rapidtechnological advances and highlycompetitive markets.This study highlightedthe importance of leadership andorganizational culture. Besides these twofactors, there are a number of other factorsthat influence the development of learningorganization. A study of other factors wouldprovide a fruitful insight in to thedevelopment of learning organization.

As Mohamad Salim Zahargier, Nimalathasan Balasundaram, (2011), employees are the most valuable asset in any organization. A successful and highly productive business can beachieved by engaging them in improving their performance. Not all employees are equal intheir working and they have different modes of working in that some have the highestcapability regardless of the incentive while others may have an occasional jump-start. If theyare handled effectively, the result can be greater productivity and increased employee morale.Employees in a firm are required to generate a total commitment to desired standards ofperformance to achieve a competitive advantage and improved performance for sustainingthat competitive advantage at least for a prolonged period of time, if not forever.

Dr. M. Subramanian (2012)this researchpaper was on the organizational culture of Adrenalin Systems Ltd. where theOCTAPACE tool implemented by T.V.Rao wasimplemented by conducting descriptiveresearch and judgment sampling.The studyfocuses on organizational culture experiencedby software employees (IT Professionals).Atotal of 200 software employees were selectedfor the study. The study was undertaken inChennai which is a capital city of Tamil Nadu.Some of the dimensions of OCTAPACE cultureviz Authenticity, Autonomy, andexperimentation showed lower limit thanstandard norms. This requires furtherinvestigation.

Dr. A Senthilrajan, P Renganathan (2013)Astudy on employees intuitivism towardsorganization culture and practices in AutoComponent industry, gains significant importance so that organization can bring aboutconstructive changes and developments. Thedescriptive research method is adopted in thestudy. A sample of 106 employees was takenfrom the major departments namely HR,Finance, sales, operations, and outsourcing.This study helped to understand theirorganizational culture and further aids to satisfythe expectations employee-employerrelationship. However, this study is confinedonly to the automotive component industriesand further research can be done onorganization culture pertaining to variousindustries as their nature of business andoperations vary from one industry to another Industry.

A study was conducted by S.A. Mufeed and S.N.Rafai on the Need for OCTAPACE culture in tourism sector, to identify the major factor that non-promotes for organizational effectiveness among staffs and to measure the prevailing culture within the organization. This study stated that high OCTAPACE profile will contribute to high organization dynamics and organizational effectiveness.

3. ORGANIZATION PROFILE
Mac Vehicles Pvt. Ltd., Yavatmal
Mac Vehicles is one of the dealer of Tata vehicles in Yavatmal. Tata Motors authorized services station named as MAC motor. The Tata Motors is one of the world's fourth- largest bus and truck manufacturer and India's largest automobile company. It has manufacturing sites in Europe, Africa, and Asia.

Mac Vehicles is customer support authorized service station of Tata motors of commercial vehicles established in 2010. And also there is manufacturing of other transport equipments.

Accessibility
5km from Bus Stand

4km from Railway station

Location
MIDC, Lohara, Yavatmal.

History
In 1984, Mr. Chandrashekhar Deshmukh (C. Deshmukh) has started MAC Vehicles from dealership international tractors in Yavatmal. Further this international tractors has takeover to mahendra international company. And accept the dealership of mahendra tractors in yavatmal. In few year of dealership, Mac vehicles had chain of awards for the great success in the organization. In 1995 and 1998 , Mr. C. Deshmukh got 'Best Dealer ' award. In next coming year 2006, 2007 Mr. C. Deshmukh appreciated with "Panchratna" award for

best selling of tractors and in 2008 – Best motivator. With this achievements all these converted in to Mac Vehicles. The vision of Mac vehicles is to satisfy the customers by providing effective services only then success is in organization.

In 2006, Mac vehicles authorized showroom by commercial vehicles Tata motors in Yavatmal. And further they get dealership with Tata UV. In 2011, Mac vehicles Private Limited fully authorized by Tata Motors and awarded by best dealer award of Tata SCV and Best seller of SSI.

In Mac Vehicles, Chairman Charushala Deshmukh, Managing Director Mr. Shashank Deshmukh, Director Mr. Priyank Deshmukh, Yekta Deshmukh perform dealership successfully with the growth in showroom.

Marking Presence
Within short period of time Mac vehicles had entitled with successful chain with dealers in other cities such as pusad, wani and also get dealership with "John deer" of tractor. In future they plan to open showroom in near by cities such as washim, hingoli.

4. Research Methodology

The methodology used in this paper is Primary method to gather the information about the organizational culture of the organization. Also some secondary data has been used to support the OCTAPACE model.

RESEARCH PROCESS
Step 1: Identify the Problem
The problem the organization was identified and on the basis of problem identified the paper was accordingly designed.

Step 2: Review the Literature
Now that the problem has been identified, the researcher must learn more about the topic under investigation. To do this, some research papers on the similar topics were analysed.

Step 3: Clarify the Problem
Many times the initial problem identified in the first step of the process is too large or broad in scope. In step 3 of the process, the researcher clarifies the problem and narrows the scope of the study. This can only be done after the literature has been reviewed. The knowledge gained through the review of the literature guides the researcher in clarifying and narrowing the research project.

Step 4: Clearly Define Terms and Concepts
Terms and concepts are words or phrases used in the purpose statements of the study or the descriptions of the study. These items need to be specifically defined as they apply to the study.

Step 5: Define the Population
Population was the employees working with Mac Vehicles.

Step 6: Develop the Instrumentation Plan
The instrumentation plan serves as the road map for the entire study, specifying who is participate in the study, how when and where data will be collected and the content of the research.

Step 7: Collect Data
The data collection was done using the questionnaire and interview method.

Step 8: Analyze the Data
Data analysis has been done using statistical tools.

OBJECTIVES OF THE STUDY
1. To study the organizational culture at the Mac Vehicles, Yavatmal

2. To find out the difference between present and desired organization culture profile.

Scope
Limited to employees of Mac Vehicles Pvt Ltd, Yavatmal.(Manager, Adviser, Supervisors)

Limitations
1. Relying on respondent responses.

2. A more detailed & depth study was not possible due to time constraints.

3. Data provided by some of the respondent may not be totally accurate but all measures were taken to get the best of them.

Data Collection

In this project, data is gathered throughprimary and secondary sources.

(a) Primary Data- Data was collected by using OCTAPACE profile developed by Udai pareek. The instrument devised by U.Pareek is used for data collection The OCTAPACE profile is a 40 items instrument that gives the profile of the organization's ethos in eight values. These values are openness, confrontation, trust,

authenticity, pro-action, autonomy, collaboration and experimentation.

O-Openness

C-Confrontation

T-Trust

A-Authenticity

P-Pro action

A-Autonomy

C-Collaboration

E-Experimentation

(b) Secondary Data- Data was collected by using book, Internet, journal papers.

Hypothesis

1. There is no significance difference between present and desire profile for openness, confrontation, authenticity, Pro action, autonomy, collaboration, experimentation.

3. DATA ANALYSIS & INTERPRETATION

Descriptive Statistics

Table no- 1

Sr No	Responses	No.of Responses
1	Manager	1
2	Advisor	4
3	Supervisor	8
4	Technician	20
	Total	33

Inferential statistic
Table No-1: Openness

For evaluating the openness in organization the statement no 1,9,17,25,33 was added together.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
OP	31	3.1355	.26527	.04764
OD	31	3.5935	.20320	.03650

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
OP	65.812	30	.000	3.13548	3.0382	3.2328
OD	98.465	30	.000	3.59355	3.5190	3.6681

Where, OP-openness in present profile,

OD- openness in desire profile

From the above table, it is evident that there is a significant difference between mean value of Present Profile and Desire Profile. Hence we can conclude that there is sufficient evidence to reject the null hypothesis.

Table No-2: Confrontation

For evaluating the confrontation in organization the statement no 2, 10, 18, 26, 34 was added together.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
CP	31	3.0194	.34777	.06246
CD	31	3.6323	.21968	.03946

One-Sample Test					
				Test Value = 0	
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference
					Lower	Upper
CP	48.339	30	.000	3.01935	2.8918	3.1469
CD	92.060	30	.000	3.63226	3.5517	3.7128

Where, CP-confrontation in present profile,

CD-confrontation in desire profile

From the above table, it is evident that there is a significant difference between mean value of Present Profile and Desire Profile. Hence we can conclude that there is sufficient evidence to reject the null hypothesis.

Table No-3: Trust

For evaluating the Trust in organization the statement no 3, 11, 19, 27, 35 was added together.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
TP	31	2.8129	.46169	.08292
TD	31	3.1935	.37411	.06719

One-Sample Test					
				Test Value = 0	
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference
					Lower	Upper
TP	33.922	30	.000	2.81290	2.6436	2.9823
TD	47.529	30	.000	3.19355	3.0563	3.3308

Where, TP-Trust in present profile,

TD-Trust in desire profile

From the above table, it is evident that there is a significant difference between mean value of Present Profile and Desire Profile. Hence we can conclude that there is sufficient evidence to reject the null hypothesis.

Table No-4: Authenticity

For evaluating the Authenticity in organization the statement no 4, 12, 20, 28, 36 was added together.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
AP	31	2.4903	.42533	.07639
AD	31	2.8452	.43423	.07799

One-Sample Test					
				Test Value = 0	
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference
					Lower	Upper
AP	32.600	30	.000	2.49032	2.3343	2.6463
AD	36.481	30	.000	2.84516	2.6859	3.0044

Where, AP-Authenticity in present profile,

AD-Authenticity in desire profile

From the above table, it is evident that there is a significant difference between mean value of Present Profile and Desire Profile. Hence we can conclude that there is sufficient evidence to reject the null hypothesis.

Table No-5: Pro action
For evaluating the Pro action in organization the statement no 5, 13, 21, 29, 37 was added together.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
PP	31	3.0000	.36515	.06558
PD	31	3.4677	.23859	.04285

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
PP	45.744	30	.000	3.00000	2.8661	3.1339
PD	80.924	30	.000	3.46774	3.3802	3.5553

Where, PP-Pro action in present profile,

PD-Pro action in desire profile

From the above table, it is evident that there is a significant difference between mean value of Present Profile and Desire Profile. Hence we can conclude that there is sufficient evidence to reject the null hypothesis.

Table No-6: Autonomy
For evaluating the Autonomy in organization the statement no 6, 14, 22, 30, 38 was added together.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
AuP	31	2.9161	.36796	.06609
AuD	31	3.2645	.34015	.06109

One-Sample Test						
	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
AuP	44.125	30	.000	2.91613	2.7812	3.0511
AuD	53.436	30	.000	3.26452	3.1397	3.3893

Where, AuP-Autonomy in present profile,

AuD-Autonomy in desire profile

From the above table, it is evident that there is a significant difference between mean value of Present Profile and Desire Profile. Hence we can conclude that there is sufficient evidence to reject the null hypothesis.

Table No-7: Collaboration
For evaluating the collaboration in organization the statement no 7, 15, 23, 31, 39 was added together.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
CoP	31	3.1355	.25501	.04580
CoD	31	3.5355	.32409	.05821

One-Sample Test					
	Test Value = 0				
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**	**95% Confidence Interval of the Difference**	
					Lower	**Upper**
CoP	68.457	30	.000	3.13548	3.0419	3.2290
CoD	60.739	30	.000	3.53548	3.4166	3.6544

Where, CoP-Collaboration in present profile,

CoD-Collaboration in desire profile

From the above table, it is evident that there is a significant difference between mean value of Present Profile and Desire Profile. Hence we can conclude that there is sufficient evidence to reject the null hypothesis.

Table No-8: Experimenting
For evaluating the experimenting in organization the statement no 8, 16, 24, 32, 40 was added together.

One-Sample Statistics				
	N	**Mean**	**Std. Deviation**	**Std. Error Mean**
EP	31	2.8581	.33543	.06025
ED	31	3.4774	.35281	.06337

One-Sample Test					
	Test Value = 0				
	t	**df**	**Sig. (2-tailed)**	**Mean Difference**	**95% Confidence Interval of the Difference**	
					Lower	**Upper**
EP	47.440	30	.000	2.85806	2.7350	2.9811
ED	54.878	30	.000	3.47742	3.3480	3.6068

Where, EP-Collaboration in present profile,

ED-Collaboration in desire profile

From the above table, it is evident that there is a significant difference between mean value of Present Profile and Desire Profile. Hence we can conclude that there is sufficient evidence to reject the null hypothesis.

4. CONCLUSION
The OCTAPACE profile is used for evaluating influencing factors of organization culture and there is difference in between present and desired profile. So there is scope for improvement

5. SUGGESTION
- Openness- For avoiding the difference between present and desire profile, the organization can arrange various activity among the employees so that they can interact freely and they can easily understand the feelings of others as well as discussed their problems with seniors.

- Confrontation- the senior should look upon the employees who are hiding and shying during work and they should understand their personality so that they can try to develop themselves.

- Trust- to increase trust among employees, senior should win the confidence of employees.

- Authenticity- the senior should study the difference between what people do and say and train them with tact and smart work.

- Proaction- the senior should encouraged their subordinates to think about their development and take action that direction and overcome their mistakes

- Autonomy- the senior should the opportunity to take independent action relating to theit jobs so that they can improve their skills and ability.

- Collaboration- the employees should do team work so that they can help each other. And senior should involved in developing on organization mission and goals contributes to productivity.

- Experimenting- the senior encourage employees in solving problems in more innovative ways.

REFERENCES

- ZENITH International Journal of Business Economics & Management Research Vol.2 Issue 5, May 2012, ISSN 2249 8826 Online available at http://zenithresearch.org.in/ www.zenithresearch.org.in 133 .

- Project Submitted to RTMNU By Manjiri Umate under the guidance of the Author Dr. Soma Sharma, DMIMS, Nagpur.

MIGRATION AND ITS EFFECT ON INDIGENOUS KNOWLEDGE SYSTEM: A STUDY ON THE TEA GARDEN LABOURERS OF TINSUKIA DISTRICT, ASSAM

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ABSTRACT

The tea garden labourers of Assam were brought by the British officials from predominantly tribal and backward class dominated areas of Jharkhand, Odisha, West Bengal, Telangana and Chhattisgarh for the work of expanding tea industry in Assam. They are one of the most socially and economically backward and exploited community in Assam. These labourers were paid poorly and their living condition was pathetic. The labourers had to live with the basic facilities provided by the tea planters. Migration effect their indigenous knowledge system, they left their own land and far from that environment. Indigenous knowledge system is closely related to ones surrounding. The tea garden labourers got migrated from a natural environment to a man made environment or industrial area which force them to change their rules and regulations associated to their daily livelihood system and it affected their indigenous knowledge system. The indigenous knowledge system of the tea garden labourers transmitted orally from one generation to another generation and due to lack of proper way of transmission from the elder generation to the younger generation they are losing their indigenous knowledge system day by day. The data of the study collected through PCS, interview and observation method.

Keywords: Migration, Indigenous knowledge, Tea garden labourers, Livelihood condition

INTRODUCTION

Tea is one of the major products in Indian economy. Tea which holding a particular trend in the Indian economy. Tea is one of the major sources to earn the foreign exchange for India. It is basically an agro based industry. India produces almost 22 percent tea of globe. Assam is among the leading tea productions of globe. Tea industry has large contribution to the economy of Assam. Assam produces 55 percent of the total national production of tea in India and 1/6th of the world tea production (The Govt. of Assam, official website). The first tea plant was discovered here by Robert Bruce in 1823 at Sadiya, and traditionally it was first grown in 1840. The first gardens opened out and planted in India were those in the northern part of the valley of Assam, under the orders of the then Government of India, and under the immediate super- vision of the late Generals Jenkins and under the immediate super- vision of the late Generals Jenkins and Vetch, the former of whom was commissioner of the province. In Assam total 26,739 hectare of geographical land are under tea plantation coverage and the total production of tea was 45,12,36,000 kilograms with an yield of 1688 kg/hectare. In Assam there are 28,000 small and 800 medium to large tea gardens, producing 70 million kilogram of tea annually. About 17 percent of the workers of Assam are associated with the tea industry and approximately it supports nearly 25 percent of the State Domestic Product (Tea Statistics, 2009). 13% of global tea production is from Assam. In 1911 Toklai Tea Research centre was established to find out the ways for cultivating tea in a more scientific method and for well development of tea industry in Assam, this was the turning point in the field of tea cultivation on Assam.

In tea industry of Assam, Tinsukia district has its own recognition. The geographical area of the said district is 3790 sq.km. and the latitude is $27^0 23'$ to $27^0 38'$N; longitude $95^0 22'$ to $95^0 38'$ E. The total population of the district is 1,316,948 with 675,986 male and 640,962 female. The total Scheduled Tribe population of the district is 82,066, which is 6.18% of the state, comprised of 41,769 male and 40,297 female. The total worker of the district is 5,57,196 and among them main workers and marginal workers are 4,10,188 and 1,47,008 respectively (District Census Handbook, 2011). In Tinsukia district, there is 549.47 hectare of land covered under tea plantation whereas there are about 241 small tea growers. It produces 3,947 kg of tea per acre (Tea Statistics, 2009).

STUDIED AREA

The study conducted on the Khobong tea estate and Koomsong tea estate of Tinsukia district. Gardens are selected on the basis of geographical area, first one is the largest in Tinsukia district and second one is the comparatively a small one, one is established under the British authority and another is established under Indian authorities. Generally the concerned labourers are belonging to the Santal, Munda, Oraon, Sawra, Kishan, Bhumij, Garh tribal groups. According to the tea statistics of Assam it can be represented through the following table-

Table-1: Studied Tea Gardens

Name of the Tea Estate	Gram Panchayat	Block	Area (in hectare)	Working population
Khobong	Khubang	Doom Dooma	1548.43	3812
Koomsong	Kakopathar	Doomdooma	1002.18	1311

Source: Field study
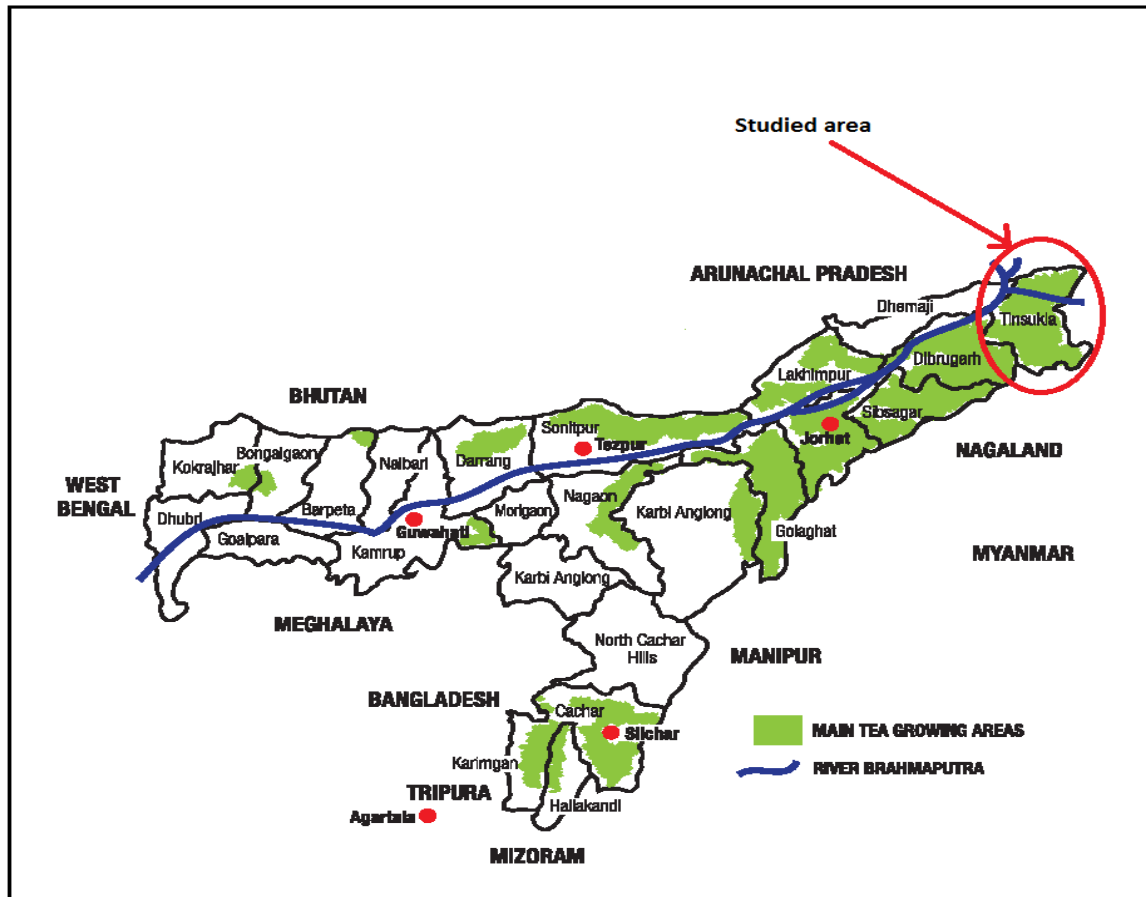
OBJECTIVES AND METHODOLOGY

Objectives: The present study is primarily focused on-

1] To know about the history of migration of the studied people.

2] To know about their socio-economic and livelihood condition.

3] To know about the impact of migration on their indigenous knowledge system.

To collect primary data through empirical field work related to the aforesaid issues, following methods were applied-

METHODOLOGY

The present study was conducted on two tea garden of Tinsukia district Assam viz., Khobong tea garden and Koomsong tea garden in Assam. It was primarily focused to know about the migration of the tea garden labourers from their mainland and their socio-economic and socio-cultural significance and its impact on their indigenous knowledge system of the tea garden labourers. The livelihoods of the concerned people were associated with their surroundings. When they got migrated to the tea gardens, a man made environment. They had to change their traditions and customs due to the change in their environment and it affected their indigenous knowledge system. The study was done on 200 families with total population of 1267, where there were a total of 659 males and 608 females. These studied families are primarily associated with tea plantation work.

A pilot survey in the study area was conducted during August 2016. The field work was conducted into various phases. It was started from November 2016 to September 2017. There were four phases of the total field work.

In the first phase, the general observation of the study areas was done along with the preliminary census schedule.

In the second phase, case studies were taken focusing on the issues related to their migration from their mainland and the issues related to the impact on their indigenous knowledge.

In the third phase, unstructured interviews were taken from the key informants, village elders, garden officials and medical officials on the significance of their socio-economic, socio-cultural, their livelihood and environment and its impact on their indigenous knowledge.

In the fourth phase, the primary qualitative and quantitative data were analysed.

FINDINGS AND DISCUSSION

Issues of migration: Due to industrial capitalist nature of organization of plantations local peasants were not attracted to take wage work in the new employment section. Non availability of worker was the main hurdle faced by the tea planters at the initial stage of growth of plantation. Up to 1860 only local labourers were recruited for the plantation. However after 1865-66 labourers was supplied from outside. Large number of labourers was supplied from Bengal, Orissa Bihar and Madhya Pradesh. Locally they are known as coolie. They were bringing under the Act XIII. According to this they had to sign an agreement to their employer after taking advance and they have to complete the contract and if in case they deny following the contract or not completing the contract empowered the employer to punish him. The employers had no rights to private arrest and force the coolie to stay for a long period of time, as the contracts were generally for a period of not more than a year. But there were doubts expressed regarding the appropriateness of the Act XIII, to the engagement of tea-garden labour. In the 1880s, the Chief Commissioner Charles Elliot proposed the withdrawal of the Act from the province. Tea plantation laboures belong to the tribal communities like the Santhal, Munda, Oraon, Gond, Kisan, and Nagesia. The system of labour recruitment held in two ways. Firstly, recruitment of labour by licensed contractor and secondly through the *sardar* system. In the first system, through the licensed contractor, he employed a large number of unlicensed man, who went to the villages and try to get consent of the coolie to get emigrate. As soon as he get consent of a coolie he took him to the registered office and who, after questioning him to ascertain whether he is willing to go and understands what he is doing, registers his name. He was then taken to the contractor's depot where he must remain at least three days before he can be placed under contract. This period was prescribed to allow the emigrant" to see his friends and to have a chance of changing his mind, "After spending three days in the depot, if the contractor succeeds in getting a good price for him, the coolie was taken before a Government officer to execute a contract and is then send to Assam. He was not having any idea as to which garden he will go to, and he did not get any part of the large price paid for him, usually the contractor and his recruiters take it all and, Once he has obtained his price a Contractor has no farther concern with the coolies whom he sends to the tea gardens, and it matters nothing to him if they abscond or turn out to be unsuitable for the work which they are expected to do. But in the second system, recruitment of labour through the garden *sardar* is different from the first one. The garden sardars were the common garden coolie. Garden *sardar* brought coolies to his garden where he worked and he recruited his friends and relatives. In this system when a garden sardar recruits coolies they had an idea about where they were going, what kind of work they were going to do. The tea garden labourers came for two different period of time. One group came for six month, after six month they went back and another group came for two years but after completed two years they settled here instead of went back to their place. The number of imported laboures from 1872 to 1880 was 26,321. In 1872 they were about 40,000. In the same year the total number of migrants including tea laboures was 80,000 out of the total population of 1,496,000 in Assam. The average rate of wages per month in Assam was from 2 rupees 8 annas to 3 rupees previous to 1857. In 1859 the wages rose to 4 rupees per month, for labour, and since that to 7 and 8 rupees per month. In 1856-57, the price of dhan, i.e., rice in the husk, was about I rupee, or 2S. For eight maunds, or 640 lbs. In 1862-63 it had risen to x rupee for two maunds, or i6o lbs., and since that the rate per maund has increased to 2 and 3 rupees. The revenue in 1852-53 amounted to 750,000 rupees, or 75,0001. (Baruah,2008:10).

Livelihood condition and issues related to indigenous knowledge: According to International Organization for Migration, "no universally accepted definition for (migrant) exists. The term migrant was usually understood to cover all cases where the decision to migrate was taken freely by the individual concerned for reasons of "personal convenience" and without intervention of an external compelling factor; it therefore applied to persons, and family members, moving to another country or region to better their material or social conditions and improve the prospect for themselves or their family. The United Nations defines migrant as an individual who has resided in a foreign country for more than one year irrespective of the causes, voluntary or involuntary, and the means, regular or irregular, used to migrate. Under such a definition, those travelling for shorter periods as tourists and businesspersons would not be considered migrants. However, common usage includes certain

kinds of shorter-term migrants, such as seasonal farm workers who travel for short periods to work planting or harvesting farm products." (IOM, Glossary on Migration, International Migration Law Series No. 25, 2011).

Indigenous knowledge is how traditional cultures in many diverse ways have organized their ancestral knowledge concerning their cultural beliefs, linguistic practices, and the historical interpretations that have given meaning to their lives (Cajete, 2000:17). This form of indigenous knowledge construction is transmitted through oral tradition and is based on the holistic perspectives of the interconnectedness of all areas of life as seen by indigenous perceptions of the world. It comes out of the direct experience with the environment and within the native cosmologies and values that interpret and frame its construction. It is this knowledge that dense indigenous identity and how they perceive and transmit their understanding of the world (Ortiz, 2009:15).

Indigenous knowledge referred to traditional ecological knowledge or the local knowledge that is unique to each and every culture or society. Indigenous knowledge is the ethno based scientific knowledge. Indigenous knowledge developed from sets of experiences related to the living environment. Indigenous knowledge transferred from one generation to the other generation orally and through cultural ceremonies. It is the basis of every society or culture like agriculture, food habits, treatment to injuries or diseases, cope up with environmental hazards.

The community of tea garden laboures is an amalgamation of different ethnic groups and castes like Munda, Orang, Kishan, Sawra, Bhumij, Karmakar etc. brought by British officials to the tea gardens. They are from different environment, cultural practices, customs, traditions and socio-economic background particularly coming from the central Indian region. Each and every social group has their own traditions and customs. They had rare interaction with the outside world. They were deliberately isolated from the local population by the management. Due to this lack of communication they lost all contact with their age old ancestral land and gradually they became the permanent residents of the studied region. After got migrated to the tea gardens of Assam they primarily associated with tea plantation work they created a common culture. The livelihoods of the tea garden labourers are mainly associated with their primary occupation they went to their work by 7 o'clock in the morning and come back to home by 5 o'clock in the evening. Both male and female are associated with the work of plucking, cutting of tea plants. The wages of tea garden labourers are paid on 14 days basis, the daily wage paid to the permanent and temporary workers is 137rs which is 3562 monthly, which cannot even fulfill their minimal needs. Migration effect their indigenous knowledge system, they left their own land and far from that environment. Indigenous knowledge system is closely related to ones surrounding. The tea garden labourers got migrated from a natural environment to a man made environment or industrial area which force them to change their rules and regulations associated to their daily livelihood system and it affected their indigenous knowledge system.

Sawra tea tribe is also playing an important role among the tea tribes of Assam. They follow their cultural and religious traditions and faiths. Sawra tea tribe follows the rules and regulations associated with death ceremonies. The purpose of practice the rituals associated with the faith that of safety, security and physical well being. Earlier the death ceremony was practiced in the death of each and every different individual death, but after migrated to the tea gardens of Assam they faced many problems related to the ceremony and they were not able follow the proper rituals and with time they forgot the proper rituals. Now a days they in a Sawra village, if in a year there are 8 people died of their community of that place they perform the death ceremony only for one time for all the eight people altogether. This is because of their working environment, like lack of money, time etc. This is affecting their indigenous knowledge system, and it is not transmitting properly from one generation to another generation.

In some Tea garden communities like; Bhumij, kishan, Munda there were tradition of making tattoos in the body of women, which was noticed in the elder women but not in younger women. This is because they were unable to transmit the value of the tattoos of their body. Now a day they don't know the proper way of making tattoo, it was also a part of their indigenous knowledge which they are losing gradually.

In the tea garden communities like Munda, Oraon, Sawra, during pregnancy it is prohibited to go out in the in the mid-afternoon and sit under the big trees. But due to their working environment they have to go for work and they used to sit under the big trees to have their lunch because there is no facility provided by the garden to sit somewhere properly and eat lunch.

GENERAL OBSERVATION

The dimension of time is always changing and along with that the livelihood of the human being cannot remain static. Today with the rapid influx of globalization we are progressing towards the threshold of a new era of advanced techno-economic development, modern livelihood accessibilities and a number of other conveniences

which will cumulatively pave our way for overall societal betterment. But on the other hand, there are a huge section of people who are poor, marginalized and are struggling in every perspective of their livelihood to accumulate the common minimum requirements for their survival. They are completely in the opposite domain of this progressive world and are gradually lagging far and far behind in the steady and faster rate of overall societal and techno-economic development. The studied people came to the studied area for the sake of new occupation and scope of livelihood sustenance. However, their socio-economic condition reflects that still they are struggling for comfortable and socially secured livelihood amenities. On the other hand, due to migration and new occupational involvement, a number of their age old indigenous knowledge system and traditional cultural practices could not be noticed any more, even the contemporary younger generations had no idea about such practices at all.

REFERENCES

* Baruah, P. (2008). *The Tea Industry of Assam: Origin and Development*, EBH Publishers, Guwahati, Assam. ISBN-81-903834-6-2, Pg.1-318.

* Cajete, G. 2000. "Indigenous Knowledge: The Pueblo Metaphor of Indigenous Education". In: M. Battiste (ed.). Reclaiming Indigenous Voice and Vision, pp. 181-191. Vancouver:Press.

* Gadapani, Sharma, (2007), "*A study on the socio-economic conditions of Labourers in the Tea Gardens of Jorhat, Assam.*"

* Gruning, J. F. (1909). *Recruitment of Labour for Tea Gardens in Assam*, University of California, Shillong.

* Magar, C. (2016). 'Place of Tea in the Culture, Economy and Polity of Assam: A Geographical Analysis', an unpublished Ph.D dissertation submitted to the Department of Geography, Gauhati University

* Tanti, S.K. (2002). 'Chah Janagosthir Bhasa Samporka', (in Assamese), *Amar Asom*, 4th March, 2002

* Sengupta, S. (2009), *The Tea Labourers of North-East India: An Anthropohistorical Perspective.*

* Ortiz, P. (2009), *Indigenous Knowledge, Education and Ethnic identity: An Eth-nography of an Intercultural Bilingual Education Program in a Mapuche School in Chile.*

THE EXTENT AND NATURE OF SECOND LANGUAGE RESEARCH IN THE LAST TWO DECADES WITH SPECIAL FOCUS ON THE GRAMMAR TRANSLATION METHOD AND THE COMMUNICATIVE APPROACH: A RESEARCHER'S ANALYSIS

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ABSTRACT

Enormous number of research papers in English Language Education is being published and circulated electronically all over the world. A close and regular acquaintance with these works and publications is vital for the researcher, otherwise he will not be in a position to fashion his research in an innovative way. This will enable him to test and apply his theoretical proposition in a scientific spirit. The present paper happens to explore the varied levels of research findings done by researchers in the domain of second language teaching, specifically in the backdrop of India in the last two decades. The paper also examines the nature of second language research from varied angles with a view to highlighting the need to undertake research from experimental point of view. Apart from this, it also focuses specifically the spirit of investigation conducted by researchers to test the efficacy of Grammar Translation Method and the Functional Communicative Approach and the special need to carry out research to compare the effectiveness of these two methodological paradigms.

1. INTRODUCTION

While conducting research on English Education a thorough survey of literature is a prime task since English, being a multi-national language, its penetration in the language teaching research is beyond our imagination. As, in most of the countries it is offered as a second language, so the question of second language acquisition is a fitting subject of research and experimentation. Inevitably so the research and exploration in the process of target or second language acquisition is going on all over the world giving birth to a number of methodological paradigms. Again the question regarding the appropriateness of a particular method or approach in the context of the target language teaching in a particular socio-cultural set-up of a particular country gains priority. This has again given birth to a consecutive number of researches and experimental explorations. Literature review in the field of English teaching methods is not merely a strenuous task but also demands tact and extensive survey. While making review the researcher has not only to make exploration into large number of books, periodicals and journals but also an intensive search in the world of internet on the current empirical findings relevant to his research work.

Language teaching is sometimes discussed in terms of a few related aspects- namely, method, approach and technique. While approach is based on some theoretical assumptions and propositions, method refers to a way of teaching a language which is based on systematic principles and procedures, i.e., which is an application of views on how language is taught and learned. Methodology refers to the study of the practices used in teaching and the principles that underlie them. It includes:

❖ Study of the nature of language skills and procedures for teaching.

❖ Study of the presentation of lesson plans, materials and textbooks for teaching language skills.

❖ The evaluation and comparison of teaching methods

2. RESEARCH ON SECOND LANGUAGE TEACHING METHODS

Patel, Tarun (2012) gives a comprehensive description of different types of approaches and methods which are actually discovered in abroad but which are being applied in India. The salient features of the existing methodological paradigms such as Grammar Translation Method, Direct Method, Structural Approach, Situational Learning, Communicative Approach etc. are described. He also projects the uses of these methods against Indian backdrop. He comes to the conclusion that more or less each and every method entails some merits and demerits. He thinks that for achieving the teaching objectives a teacher should not be rigid in using any sort of method or approach. He should be apt in choosing a method or an approach according to the subject matter and expected objective. He opines that in course of time not only G T Method but also Structural Approach, Communicative approach have enriched the domain of target language teaching and provided valuable insights to the experimental teachers for making teaching accessible to the learners. He comes to the conclusion that no single method can satisfy the needs of all sorts of learners and teachers. The mode of appropriate combination of all methods and approaches in the classroom situation can only ensure the success of target language teaching

Ansari, Mohammad Shaukat. (2011) propagates that the ESL/EFL learners vary not in terms of their learning purposes but also in terms of individual differences in learning due to their educational, ethnic, and cultural diversities. To make ESL learning successful the educators must understand and respect individuals' diverse learning styles and make efforts to create optimal learning environments for learners. He has suggested a number of ways for implementing learning style preferences by varying class presentation and instructions. In course of his discussion he has also made clarifications of learners in view of their learning styles such as innovative learners, analytic learners, commonsense learners, dynamic learners, visual learners, auditory learners, tactile/kinaesthetic learners etc.

Educators must employ instruments to identify students' learning styles and provide instructional alternatives to address their differences. Teachers should plan lessons to match students learning styles while at the same time encouraging students to diversify their learning styles preferences.

However it is important to remember that all existing learning styles, instruments and learning strategies are at their infancy and need further testing through classroom application. As ESL/EFL professionals we need to deepen our understanding of the nature of human differences in learning so that we can maximise the potential of our flexible open ended curricula of individualised instruction.

Prinanda, Amrita (2011) investigates the role collaborative learning in teaching and learning English. The study primarily conducted in the backdrop of Orissa intends to measure the effectiveness of collaborative learning strategies on teaching and learning of English at secondary school stage in terms of improvement of learning achievement in English; participation of students and teachers in teaching process and perception of teachers. Students taught through collaborative learning model showed better performance than their counterparts as they were taught through conventional method. The study ensures the success of collaborative learning model. The students have shown positive attitude towards collaborative learning. The author first discusses the characteristics of collaborative classroom situation, such as, shared knowledge among teachers and students, shared authority among students and teachers, teachers as mediators, heterogeneous grouping among students etc. In fact this paper is comprehensive in the sense that it complies with all the guidelines of a complete research document. It makes proper literature review, applies suitable methodological strategy to experimentally test the effectiveness of this teaching model.

Non-randomized two group pre-test post test design has been employed for the experiment. In order to get the exact effect of intervention the pre test has been conducted among the students. After the intervention the post test has been conducted by the investigator. For the experimental study three secondary schools having two sections each from class nine of three particular CBSE schools from Bhubaneswar had been taken. One section was taken as the experimental group and another group was taken as control group. Experimental group was taught through collaborative learning model whereas, the control group was taught through conventional method. The result and analysis were given separately for achievement, communicative skill and critical thinking. The statistical analysis reveals that there is significant difference between the performance scores of experimental and control group in listening skill, speaking skill, reading skill and writing skill.

Chang, Shih-Chuan.(2011) aims to compare the feasibility of Grammar Translation Method and Communicative Approach in case of teaching English Grammar. Two classes were selected and taught by GT Method and Communicative Approach. The college admission tests show that they share a similar level of proficiency before intervention. The pre-test demonstrated that there was not any distinction between the two classes in their grammatical competence. The post-test demonstrated that there was significant difference in their grammatical competence between the two classes. The scores of the students in experimental class were higher than that in the control class. The result showed that the grammatical teaching in the framework of grammatical teaching was better than the communicative class.

As regards methodology the experimenter adopted the devices of pre-test, post-test, questionnaire. As regards procedure the experimenter followed the following modes:

➢ The experiment was carried out in the first semester of 2008 to 2009.

➢ At the first stage an examination paper was distributed to all the participants. The main task of this stage was to compare and analyse the pre-test scores of the two classes

➢ The second stage was the experimental stage .the Imperatives, Passive Voice, Attributive Clause, Non-finite Verb, were taught during the time .The author taught the two classes using two different methods .The experimental class adopted the Grammar Translation Method while the control class adopted the communicative approach in grammar teaching.

➤ In the third stage, a post test was administered to all participants. Scores of the two classes were collected then to test the effectiveness of the learner development program on their grammar performance. Analysis of data was done with SPSS 16.0.

All the tests are implemented under the supervision of the English teachers of the experimental class and the researcher. The tests are respectively taken at the beginning and at the end of the semester. Scores are seriously given based on the scoring criteria in each part. The researcher makes analysis on experimental group scores by using SPSS 16.0. Independent Samples T-tests and paired samples T-tests are taken to see whether the subjects can make significant progress in Grammar Translation Method. Grammar scores are adopted and the confidence interval is set at 95%.

From the experiment the researcher comes to the following conclusion:

❖ The grammar translation method is more effective in improving learners' learning confidence and motivation than the communicative approach.

❖ The best way to improve situation in case of grammar teaching is to combine both the Grammar Translation method and the Communicative Approach.

3. RESEARCH IN ESL TEACHING ON LEARNER-ORIENTED STRATEGIES
In a comprehensive study by Das Nanda and Dash (1996) the cognitive profiles of poor and good readers in Oriya and English studying grades three and five are compared. The profile shows that a poor and good readers in Oriya as first language is also a poor reader in second language because of problems of planning and attention. Gupta (1996) compares trained and untrained English language teachers and reports that untrained teachers have difficulties in comprehension and have a poor knowledge of synonyms. The findings highlight the needs for viewing teacher competence as one of the main strategies in language teaching. Deivasundaram (1995) discuses the advantages of using the principles of transformational generative grammar of CLT for teaching mother mother-tongue whereas Subhramaniam (1999) compares the different methods from historical perspective. Khalique (1995) compares the use of direct, structural and translation methods of teaching and reports that most of them use translation method for language teaching whereas Sudhakar (1993) discusses the shifting role of grammar in various methods of English language teaching.

As regards material-oriented strategy Bharucha (1993) advocates a holistic approach for material preparation in English with concern for learner teaching process and learning outcomes. Bose (1993) also emphasises the need for a functional approach rather than a structural one for English language teaching. The use of pre-unit activities is also advocated to familiarise learners about the concepts to be learnt at the higher primary levels of education. The study of Ganguly and Ganguly (1996) makes a significant finding. They report to the use of strategies like explaining rules of languages, questioning, paraphrasing, and lessons in their text books, dictating model, answers and pattern drills for teaching English. However, according to their findings, in spite of these strategies learners are not in a position to use language fluently at all. This finding is significant in the Indian context because it brings to the fore the need for suing different strategies for first and second language .In the first language, the oral skills are naturally developed. In schools the learners are given opportunity to extend and expand these abilities .In case of second language the oral language is generally neglected in the curriculum and the focus is on teaching the orthography, reading, writing, using strategies that are similar to the first language learning. With this result, although the strategies are used they themselves do not result in effective language learning. For strategy training, the finding shows that strategies per se should not be of prime consideration; rather the focus should be on type of strategies in relation to the objectives of teaching either as a first or second language.

Buch (1997) empirically shows the benefits of using remedial package for teaching oral skills for secondary students learning English. These materials are reportedly helpful even for slow learners in enhancing language skills. From these findings it appears that for successful skill development, particularly at the upper primary and secondary stage, the learner has to be totally involved in the learning activity to the point of being un-self conscious. The use of strategies like role play and performing arts help learners to be actively involved in the learning process.

4. PREVIOUS RELATED RESEARCHES INTO GRAMMAR TRANSLATION METHOD
Austin J Damiani (2003) opines that he liked using the grammar translation method because he could assume the intelligence of his students; he could talk to them like the intelligent people that they are, and they could talk about the grammar and vocabulary that he was teaching. In another method, he thinks that he would have had to use simple language and familiar phrases to communicate in the target language, and even then he could not be

sure that his students knew and understand what it was that they were saying. Cunningham, C. (2000) states that while there may indeed be some negative effects from using translation, there is a place in the learning environment for translation which can contribute to the students' acquisition of the target language at all levels. Brown, H.D. (1994) while talking about the principles of language teaching states that the Grammar Translation Method does virtually nothing to enhance a student's communicative ability in the language. Stern, H. H. (1992) while talking about the issues and options in language teaching indicates that a contrastive analysis, just as the comparative linguistics studies, is indeed very important for the second language learner. Therefore, translation in one form or another can play a certain part in language learning.

Stern (1991) thinks that a contrastive analysis, as in the comparative linguistics studies is indeed very important for the second language learner; translation, therefore, in one form or another can play a certain part in language learning. He thinks that by adopting a contrastive study approach, similar to the interlineal translation employed in comparative linguistics, pedagogical translation would not only help reveal the structural feature of second language by means of first language and expose the similarities and difference on various linguistic levels between the two languages to the learner, but by representing these structures of the second language in way to adopt to the norms of the first language, produces a readable TT (Target Text) for the learner's easy reference.

While most of the recent ELT experts point out the negative effects of the mother tongue interference in second language learning, Duff (1981) unlike the behaviourists, cherishes a positive view on the role of the mother tongue in the process of the second language acquisition by the learner. He infers that our first language constructs our cognitive dimension for thinking and also directs our mode of using the foreign language (choice of words, word order, sentence structure, etc.). Translation helps us understand the influence of one language on the other, e.g., areas of potential errors caused by negative transfer from the first language. When the learners will be conscious of the first language interference, they will strategically try to avoid committing such errors during the second language process. Even students will develop the capability to explain the nature of the errors committed by them and also be alert not to make the same mistakes again.

5. PREVIOUS RELATED RESEARCHES INTO COMMUNICATIVE APPROACH

Hawkey (2006), in Italy, tried to investigate whether the teachers agreed with the advantages of the communicative approach in language teaching. He applied both survey and face-to-face interviews to explore his findings. His results expose that teachers display positive attitude towards CLT since this approach, according to them, improve learner motivation, interest and communicative skills. His interviews with the teachers suggest that the teachers were motivated to use pair-work activities to meet the learners' communicative needs. Karim's (2004) study examined university level EFL teacher's attitude towards CLT in Bangladesh. The findings showed that most of the teachers displayed positive attitudes towards fundamental tenets of CLT. He interestingly explored that the teachers' perception of CLT corresponded with their practice.

Liao (2003) examined high school English teachers' attitudes towards CLT in China. The findings of the first phase reveal that most of the Chinese teachers are favourable in the implementation of CLT in the school level. The results uphold that among 302 participants, 94% spoke positively in favour of CLT and were inclined to practice the approach. In the second phase interview study, four interviews were selected from survey participants who displayed favourable attitudes towards CLT. The teachers expressed that they should take into account the students' need and that the aim of the class is to enable students to communicate easily in the real life situations. Li (2004) conducted research to know the Chinese EFL teachers perceptions regarding the implementation of communicative language teaching at the tertiary level. His study indicates that the teachers are of the opinion that the learners must be given feedback when they produce L2 to modify their production. He thinks that since the learners already know how to negotiate meaning in their first language, what they needed to learn were words in order to use them in L2.

Chang's (2000) survey in Taiwan investigated 110 high school English teachers' attitude toward CLT and their practice of CLT. The results showed that Taiwanese high school English teachers hold positive attitudes towards CLT. Moreover, the teachers who hold positive attitudes towards CLT tend to use more communicative activities in their classroom practice. Tsai,s study (2007) indicates that Taiwanese students have no immediate need to communicate in English; on the other hand, they need grammar and reading skills in order to learn content knowledge. The study conducted different researchers tend to point out that the application of communicative Approach in Asia countries has not provided expected results. Burnaby and Sun's study (1989) emphasizes that teachers in China found it difficult to use communicative language approach because of the class sizes, resources and equipment. Ellis (1994) conducted a study in the backdrop in Vietnam and confirmed that the class size grammar based examination and lack of exposure to authentic act as constraints on using communicative language approach.

6. RESEARCH GAP

The total research areas covered within the experimental domain of second language teaching methods can be broadly discussed under two heads:

➢ Experimental studies being undertaken abroad, apart from India

➢ Experimental studies being undertaken in India

Let us look at the research article on English teaching methods by Patel(2011).So far as the nature of this article is concerned it is purely theoretical. Hardly has it any experimental focus. It can only provide one-dimensional insights regarding the basic tenets of methodological paradigms. Naturally the question of applicability of any of the commonly pursued methods for teaching English does not find any mention here. The author doesn't even throw any proposition regarding the comparative acceptability of the commonly practiced methods to be established by means of empirical studies.

Ansari (2011), on the other hand, has suggested some ways how to make varying classroom presentation to implement the learning styles by the learners. But the lacuna and shortcomings of the paper is that here there is no reference to specific empirical strategies that can be experimentally attempted by the teachers to match his methods with appropriate learning styles. He doesn't mention some of the accepted learning strategies of the Communicative Approach that can feasibly be adopted by the learners for learning assimilation in effective manner.

Prinanda (2011) has really made an experimental effort to investigate the role of collaborative learning in teaching and learning English. The work undertaken by her intends to measure the effectiveness of collaborative learning strategy on learning of English at secondary school stage. She has, in fact, chosen a geographical backdrop in Orissa to test her theoretical proposition. The methodology is based on administering of pre-test and post-test and adequate subsequent data collection in the form of scores and lastly application of statistical T-test, Anova, Chi-square tests. But the area attempted here is to apply a single teaching paradigm (namely, Collaborative Learning Model). No contrast or comparison is made with other practised methods and paradigms of target language teaching at Indian backdrop. This makes the experimental scope of the work limited and incomprehensive. So the research gap is envisaged from the perspective of experimental framework.

Gupta (1996) in his thesis makes an experimental effort to test the effectiveness of trained teachers in comparison to the untrained teachers. She thinks that trained teachers' efficacy lies in administering of some scientific methods. But, the effect of those methods on pupils' learning of second language might have been a fitting area of experimentation which has escaped the attention of the subsequent researchers.

The attempt of Khalique (1995) is praiseworthy as he dares to address a hitherto research gap by comparing the use of direct, structural, and translation methods of teaching and reports that most of the teachers in Indian situations use translation methods of teaching. He does not seek to explore why the structural approach, despite being modern teaching paradigm is not duly applied by the researches in the Indian classroom situations.

The work of Bose (1993) is an important one in the sense that he projects the need for a functional approach rather than a structural one for English Language teaching. But he does not intend to investigate whether the functional approach is experimentally more effective than the structural one in the context of English language teaching at secondary level.

The study of Ganguly and Ganguly (1996) strikes a significant exploration. The study reports to the strategies that are commonly adopted by the second language teachers for teaching English. However, despite these efforts the speaking skills of the learners do not develop. He regrets that oral language proficiency is not properly fostered in the curricula. The study does not search experimentally how the strategies of communicative method may be helpful in fostering those skills (speaking and writing) among the learners. This seems to be a research gap perceived here.

As regards research conducted globally on the contrastive analysis of different ESL teaching paradigms we have discussed so far, many may be worthy of merit but the pertinent question arises up to what extent these explorations may be applicable in Indian situation. Precisely therefore, the investigation in the local situation should be an essential try-out to know the appropriate suitability of the teaching method to cater to the needs of skill development among the ESL learners. The extensive review of literature makes it prominent that the comparative and contrastive studies among multiple teaching paradigms have not been carried out to a great extent in the Indian situation. As regards the methods of second language teaching at Indian backdrop or abroad, the Functional Communicative Approach for target language teaching, in course of time, has been regarded as an effective and efficacious paradigm to facilitate the process of target language acquisition. Still at some states,

Direct Method, Audio-lingual Method, or Situational Language Teaching is being practised by the teachers as per the prescription of the respective Boards of Secondary Education of different states. Again some teachers still stick to the conventional grammar translation method to operate the second language learning process. So a controversy ensues regarding the acceptability of the above mentioned teaching paradigms. In addition, in our state i.e. West Bengal the functional communicative method has been prescribed, and, to say, accredited by the West Bengal Board of Secondary Education as the methodological paradigm to be applied and practised by the secondary teachers working at the present condition of the govt- aided schools. Keeping in view the hitherto perceived scenario, it can be said that an experimental study to compare the effectiveness of the accepted teaching paradigms might suitably address the hitherto felt research gap in the domain of second language teaching. At least, so far as the review of literature is concerned no focus on the research activities is paid on testing experimentally the relative effectiveness of the conventional method and the much-talked-about functional communicative method that is hectically being practised, pursued and applied by the second language teachers teaching in accordance with the guidelines laid down by the boards or councils. Thus the experimental effort might be undertaken to contrast the grammar translation method with the functional communicative method by means of proper application of some experimental procedures related to testing the level of applicability of different teaching paradigms at secondary level. This attempt will certainly lend concreteness and innovativeness on the experimental focus of the researcher.

7. REFERENCES

- Ansari, Mohammad Shaukat. (2011). The English Teacher and his Role in Matching Methods and Learning Styles: An Evaluation. *The Journal of English Language Teaching 49(6).*

- Auerbach, E.R. (1986). Contempory-based ESL: One step forward or two steps back? TESOL *Quarterly* 20 (3): 411,430.

- Balasubbramonian, N. (1993). A Study of pupil's academic achievement in English in relation to their intelligence. *The Journal of English language Teaching.28*(5)

- Bernet, E. & Gvozdeko, I. (2005). Beliefs about language learning; Current Knowledge, pedagogical implications, and new research directions. *Teaching English as a Second or Foreign Language.9*(1),1-21. Retrieved June 26, 2007 from http:// www.writing.berkeley.edu/tesl-ej/ej3/al/pdf.

- Bharucha, N. E.(1993). Material Production: A holistic approach. *Indian Journal of Applied Linguistics,19 (2)* July-Dec,63-83.

- Bosco, F.J., & Di Pietro, R.J. (1970). Instructional Strategies: Their psychological and linguistics bases. *International Review of Applied Linguistics* 8: 1-19.

- Bose, K. (1993).The latent curriculum: A perspective on materials design. *Indian Journal of   Education.*

- Breen, M. P., & Candlin, C. (1980). The essentials of a communicative curriculum in language   teaching. *Applied Linguistics 1* (2): 89-112.

- Brown, H. D. (1994). *Principles of Language Learning and Teaching.* (3rd ed.). Englewood Cliffs, N.J.: Prentice Hall.

- Brumfit, C. 1980. From defining to designing: communicative specifications versus communicative methodology in foreign language teaching. In K. Muller (Ed.), *The Foreign language Syllabus and Communicative Approaches to Teaching: Proceedings of a European-American Seminar.* Special issue of *Studies in Second Language Acquisition 3*(1): 1-9.

- Buch, M. B. (1997). Effectiveness of remedial packages in learning spoken English by the low achievers at secondary level. *Perspectives in Education, 13*(1), 43-52.

- Burnaby, B., & Sun, Y. (1989). Chinese teachers' views of western language teaching: Context informs paradigms. *TESOL Quarterly, 23*(2), 219-237.

- Burns, A., & Hood, S. (1994). The competency-based curriculum in action: Investigating course design practices. *Prospect 9*(2): 76-89.

- Bygate, M. (1988). Units of oral expression and language learning in small group interaction. *Applied Linguistics* 9: 59-82.

- Bygate, M., Skehan, P. & Swain, M. (Eds.). (2000). *Task-Based Learning: Language Teaching, Learning, and Assessment.* Harlow. Essex: Pearson.

- Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second   language teaching and testing. *Applied Linguistics 1*(1): 1-47.

- Chang, Shih-Chuan. (2011). A Contrastive Study of Grammar Translation Method and Communicative Approach in Teaching English Grammar. *English Language Teaching 4* (2). Retrieved from *http://www.ccsenet.org/elt.*

- Chun, D. & Plass, J. (1996b). Facilitating reading comprehension with multimedia. *System, 24* (4), 503-519.

- Das,J. P.,Nanda, S., & U. N. Das.(1996). Cognitive profile of poor readers in Oriya language: are they similar to English readers? *Psychology and Developing Societies* 8(2).

- Deivasundaram, N. (1995). GB Theory and language teaching. *Pondicherry Institute of Language and Culture, 5*(2).

- Docking, R. (1994). Competency-based curricula-the big picture. *Prospect 9*(2): 8-17.

- Duff, Alan. (1981). *The Third Language.* Oxford: Pergamon.

- Ellis, R. (1997). *Second Language Acquisition.* Oxford: Oxford University Press....

- Ganguly, S., & Ganguly, B. (1996).Teaching testing proficiency in English as a second language. *Journal of Indian Education*, 21(4).

- Gupta, K.M. (1996). Teachers' performance in mathematics and reading test. *Indian Educational Review, 3*(1), 92-104.

- Hawkey, R. (2006). Teascher and learner perception of language learning activity. *ELT Journal 60*(3), 242-252.

- Johnson, K., & H. Johnson. (1998). Communicative methodology. In K. Johnson and H. Johnson(Eds.), *Encyclopaedic Dictionary of Applied Linguistics* (pp.68-73). Oxford: Blackwell.68-73.

- Khalique, M. A. (1995). A critical investigation into the methods of teaching English in the secondary schools of Aurangabad district. (Unpublished Doctoral Dissertation). Marathwada University..

- Kumar, V. (1999). *Open Learning Strategies for Enhancing On-Campus Teaching.: An Experiment.* Retrieved from http:// www.col.org/forum/PCF papers/kumarv.pdf.

- Lamb, A. & Johnson, L. (2004). *Project, problem, and Inquiry-based Learning.* Retrieved June 9, 2007, from http://eduscapes.com/tap/topic43.htm.

- Li, P. (2004). Chinese EFL teachers perceptions of implementation of communicative language teaching at tertiary level. Unpublished doctoral dissertation, McGill University.

- Liao, X. (2003). Chinese secondary school teacher's attitude toward communicative language teaching and their classroom practice. Unpublished doctoral dissertation, the university of Auckland.

- Mohonlal, S. (2002). The influence of the dominant language. *Language in India: Strength for Today and Bright Hope for Tomorrow. 1*(10). Retrieved from http:// www.languageinindia.com./feb2002/.

- Mondal, Nitish Kumar. (2012). A comparative study of grammar translation method and communicative approach in teaching English language. Retrieved from http://www.sciencepub.net/newyork

- Natsir,M. & Dedi Sanjaya.(2014).Grammar Translation Method (GTM) versus Communicative Language Teaching (CLT); A Review of Literature. Retrieved from www.journals.aiac.org.au/index.php/ IJELS/article/view/231.

- Patel, Tarun.(2012). Research Paper: Methods and Approaches of Teaching Language as a Second Language. *ELTWEEKLY 4(7)..*

- Prinanda, Amrita. (2011). Effect of Collaborative Learning Model on Teaching English in Secondary Classroom. *The Journal of English Language Teaching (India). 49*(5).

- Richards, J.C., and T. Rodgers. (2002). *Approaches and Methods in Language Teaching.* Cambridge: Cambridge University Press.

- Stern, H.H. (1983). *Fundamental Concepts of Language Teaching.* Oxford: Oxford University Press.

- Sudhakar, G. (1993). Traditional English grammar and ELT. *Indian Journal of Applied Linguistics 14(2).*

- Thornbury, S. (2003). *How to Teach Grammar.* Beijing: World Affairs Press.

- Tsai, T.H. (2007). Taiwanese educators, perspective on the implementation of the new English education policy. (Unpublished Doctoral Dissertation). Alliant International University.

AN ECONOMIC ANALYSIS OF AREA, PRODUCTION AND PRODUCTIVITY OF SPICES IN MAJOR STATES OF INDIA

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ABSTRACT

India has dependably been known as place that is known for flavours. The term flavours allude to such characteristic plants or vegetable items or blends in entire or ground frame and as utilized for giving flavour, smell and intrigue to and for flavouring of nourishments. Flavours may comprise of various parts, for example, botanical parts (clove, saffron), or natural products (Cardamom, Chillies) or berries ((Black pepper) or seeds (cumin, celery, coriander) or rhizome (Ginger, Turmeric) or roots (horse radish) or leaves (Mints, Tejpat) or portion (Nutmegs) or aril (Mace) or bark (Cinnamons) or knobs (Garlic, Onion) or some other piece of zest plants. There are around 70 flavours developed in diverse parts of the world. India is one of the biggest shoppers of flavours. The present study is based on secondary data from 2002-03 to 2015-16 and data has been collected from various annual reports. In the present analysis of data based on appropriate statistical tools includes percentage, trend analysis annual growth rate and the same is depicted by pictorial presentation. The annual growth rate of spices under area production and productivity in India is tremendously fluctuating. Since India is not only the largest producer of spices but also the largest consumer of spices therefore the value of these spices depends on the domestic consumption. The trend analysis of major states producing spices have brought out the both positive and negative aspects of the production in the country. Where, 15 years of study shows a gradual growth of production in certain states and in some there is a drastic shift in the production rate.

Keywords: Spices, Flavours, Positive, Negative, Area, Production & Productivity

INTRODUCTION

The richness of the culture and the fragrance of the spices were the major sources of glory of the ancient India. India has maintained supremacy in the production and trade of spices even from the Vedic ages dating back to 6000 B.C, to the modern era of the third millennium. India had monopoly in the spices production and export for a very long period. But the situation is fast changing and we are facing extreme competition from many spices producing countries.

HISTORY

Since time immemorial India has been considered as the "Spice Bowl of the World". The history of Indian spices is almost as old as the 'human civilization of Spices '. The earliest written record in India on Spices is found in the Vedas – such as the Rig Veda (around 6000 BC) and the others – Yajurveda, Samaveda and the Atharveda. During the Vedic period information was primarily handed down orally from generation to generations through the medium of hymns. The Rig Veda contains references to various spices.

India produces 75 assortments of flavours out of which 109 recorded by ISO, and is considered additionally the world's biggest maker of flavours. As indicated by the Spices Board of India, a portion of the noticeable zest estate and development districts of India are   (See Table-1):

Table–1: State Wise Spices Producing Areas with Different varieties

State	Spices
Andhra Pradesh	Chili, Ginger, Mustard, Turmeric
Arunachal Pradesh	Ginger, Tejpat, Turmeric
Assam	Aniseed, Turmeric
Bihar	Ajwain, Garlic, mustard, Turmeric
Gujarat	Chilli, Cumin, Dill seed, Fennel, Fenugreek, Garlic
Hariyana	Garlic
Himachal Pradesh	Ginger
Jammu and Kashmir	Ajwan, saffron
Karnataka	Cardamom (small), Chili, clove, Garlic, Ginger, kokum, Nutmeg and mace, pepper, Turmeric, Vanilla
Kerala	Cardamom (small), Cinnamon and Cassia, clove, Ginger, Nutmeg &Mace, Pepper, Turmeric, Vanilla and Cambodge.
Madhya Pradesh	Chilli, Garlic, Ginger

Maharashtra	Chilli, Garlic, Pomegranate seed, Turmeric
Meghalaya	Ginger, Turmeric
Mizoram	Ginger
Orissa	Chilli, Garlic, Ginger, Turmeric
Punjab	Aniseed, celery
Rajasthan	Chilli, Cumin, Coriander, Dill seed fennel, Fenugreek, Garlic
Sikkim	Cardamom (large), Ginger, Tejpat
TamilNadu	Cardamom (s), Chilli, Cinnamon & Cassia, Clove, Ginger, Herbal and Exotic spices, Nut meg and Mace, Pepper, Pomegranate seed, Turmeric, Vanilla
Tripura	Turmeric
Utter Pradesh	Aniseed, celery, Chilli, Coriander, Cumin, Fenugreek, Garlic, Mustard, Turmeric
West Bengal	Cardamom (L), Chilli, Ginger, Turmeric

Source: Ever Green Exports

METHODOLOGY
The present study is based on secondary data from 2002-03 to 2015-16 and data has been collected from various annual reports like, Agriculture data base, Ministry of Agriculture and agriculture situation in India etc. The present study is covering various aspects related to year wise, state wise data on area, production and productivity of spices in India. In the present analysis of data based on various statistical tools includes percentage, trend analysis annual growth rate and other appropriate statistical tools and the same is depicted by pictorial presentation.

RESULTS AND DISCUSSION
Objective – I

Table-1: Annual Growth Rate of Area, Production and Productivity of Total Spices in India from (2000-01 to 2014-15)

Year	Area (000 Ha)	Production (MT)	Productivity (MT/Hectares)
2000-01	-	-	-
2001-02	28.8	24.54	0
2002-03	0	0	0
2003-04	60.09	35.8	-16.66
2004-05	-38.8	-21.74	40
2005-06	-24.88	-7.39	14.28
2006-07	3.46	6.69	0
2007-08	6.9	10.22	6.25
2008-09	0.45	-4.86	-5.88
2009-10	-6.27	-3.11	0
2010-11	19.31	33.24	12.5
2011-12	9.28	11.23	5.55
2012-13	-4.26	-3.49	0
2013-14	2.82	2.85	0
2014-15	19.75	-2.97	-21.05

Source: indiastat.com

The annual growth rate of Area, Production and productivity of total spices has been calculated using following formula;

$$\frac{\text{Present Value} - \text{Past Value}}{\text{Past Value}} \times 100$$

Above Table - 1 shows the annual growth rate of the Area, Production and productivity of total spices of India from 2000-2001 to 2014-2015. In India more than 90 per cent of the spices produced in the country are used for domestic consumption and the rest exported as raw as well as value added products. The growth rate was highest in the last year that is from 2015-2016. Whereas, 2003- 2006 we can see a fluctuation. Where Growth rate is has both positive and negative impact.

Graph-1: Annual growth rate of Area, Production and productivity of total spices in India from (2000-01 to 2015-16)

Annual Growth Rate of total Area, Production and Productivity of spices in India
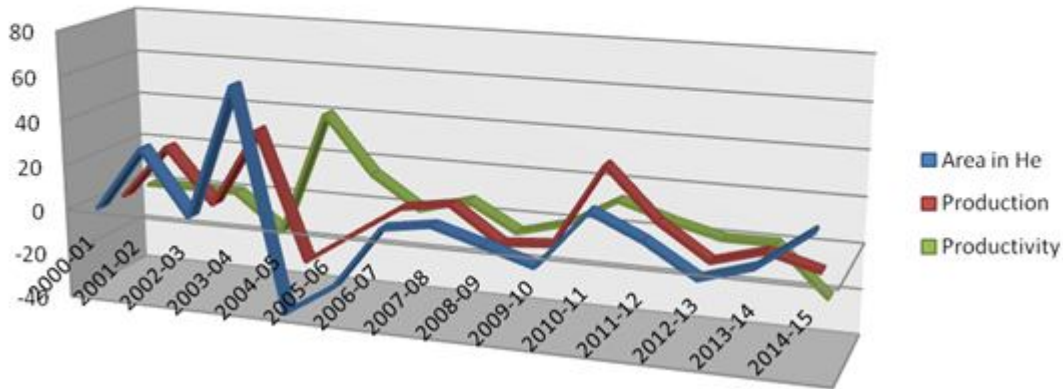
Above Graph - 1 shows India's annual growth rate of total spices from past 15 years (2000-2015). Since the India exports most of the spices produced, the major reason for the decline of production during the year 2003-2004 was due to the detection of illegal colorants by some of the importing countries. There were reports of the presence of the colorant 'Sudan 1' in some of the consignments to the gulf markets. The spice board of India also suspended the license of two major pepper exporters and three chili exporters. The competition from other countries and high domestic prices are also one reason. During the year 2004- 2006 there was a sudden increase in the productivity. In the table - 1 even though less amount of land was used for cultivation but the overall production was higher. Since India is not only the largest producer of spices but also the also the largest consumer of spices therefore the value of these spices depends on the domestic consumption. During the year 2005, there was huge demand for pepper for extraction of pepper oil and oleoresin this demand in turn resulted in the huge productivity in limited land. The sudden dip in the growth during 2008-2009 can be attributed to the crop failure. During 2009, Indian farmers faced late monsoon rain and diseases this caused low production and hence the decrease in productivity.

Table–2: The Trend of Spice Production in India (2001-02 to 2015-2016)

Years	Production	X	XY	X^2	Trend	
2001-02	3765	-7	-26355	49	3873.78	
2002-03	3765	-6	-22590	36	3975.35	
2003-04	5113	-5	-25565	25	4076.91	
2004-05	4001	-4	-16004	16	4178.48	
2005-06	3705	-3	-11115	9	4280.04	
2006-07	3953	-2	-7906	4	4381.6	
2007-08	4357	-1	-4357	1	4483.17	Base Year being 2008
2008-09	4145	0	0	0	4584.73	
2009-10	4016	1	4016	1	4686.3	
2010-11	5351	2	10702	4	4787.86	a=4588.467

2011-12	5952	3	17856	9	4889.43	**b=**102.7 643
2012-13	5744	4	22976	16	4990.99	
2013-14	5908	5	29540	25	5092.55	
2014-15	5788	6	34728	36	5194.12	
2015-16	3264	7	22848	49	5295.68	
2016-17					5410.58	
2017-18					5513.34	
2018--19					5616.1	
2019-20					5718.87	
2020-21					5821.63	
2021-22					5924.4	
Total	68827		28774	280		

The trend value of the production has been calculated using formula:

Y= a + b(X)

Number of years

$$a = \frac{\sum Y}{N}$$

$$b = \frac{\sum XY}{X^2}$$

(a = 4588.467 and b = 102.7643)

The trend of spice production in India from period 2001-2002 to 2015-2016 shows fluctuations in the production. Following are the major reasons for the shifts:

- Lack of proper training to the seed spices growers, traders, processors.

- There is lack of quality management. For increasing the overall system productivity, the challenge is to appropriately reduce the cost of cultivation.

- Due to traditional agricultural practices. This knowledge deficit needs to be overcome speedily to enhance farm productivity and profitability.

- Lack of quality planting material, small and marginal holdings, existence of senile and unproductive vines and pest and diseases are one of the major causes of production decline.

Graph–2: The Trend of Spice Production in India from 2001-02 to 2015-16
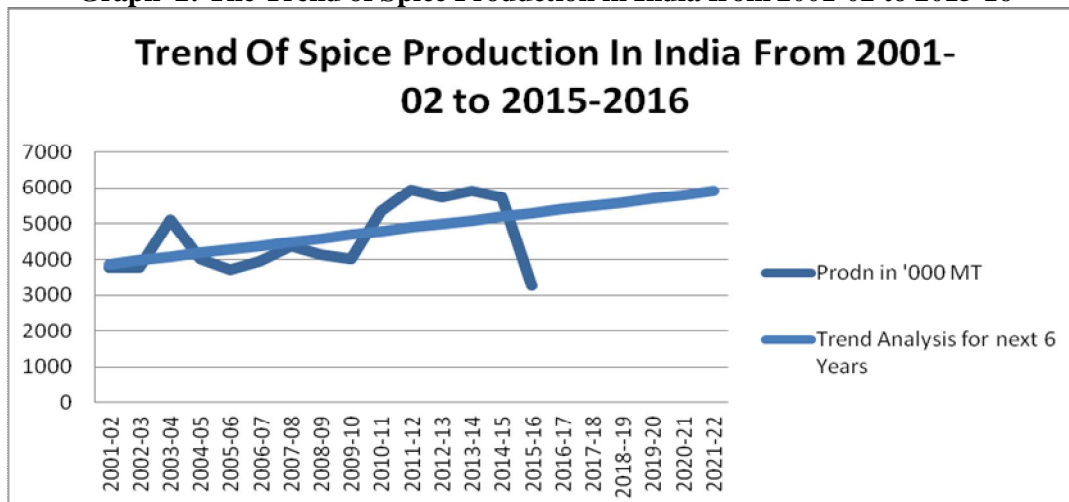
Above Graph - 2 shows the trend of spice production in India from period 2001-2016. The production of spices over last 15 years has seen mild fluctuations where production been less from 2004-2007 and being gradually increased from 2010 to 2014. The causes for the reduction is climatic changes, non-availability of quality seed, unscientific production method, negligence in training of personnel; obtaining finance, marketing problems etc. However, the production shows an upward trend analysis.

3. TO HIGHLIGHT THE MAJOR STATE-WISE TREND IN PRODUCTION OF SPICES IN INDIA FROM 2001-02 TO 2015-16

3. (i) Madhya Pradesh

The state has eleven agro climatic zones out of the total 16 in the country having diversity in soil composition and climatic condition. Nearly 3.5 percent of total cultivated land has been covered for horticulture crops. Fruits cover 63235 hectare, vegetables cover 246219 hectare, spices 309810, flowers 3800 hectare and medicinal flora cover 22900 hectare land.

Table-3 (i): Trend analysis of 'Madhya Pradesh' (2001-02 to2015-16)

Year	Production	X	XY	X^2	Trend	
2001-2002	322.1	-7	-2254.7	49	139.8	
2002-2003	152.9	-6	-917.4	36	165.4	
2003-2004	152.9	-5	-764.5	25	191	
2004-2005	366.2	-4	-1464.8	16	216.6	
2005-2006	366.2	-3	-1098.6	9	242.2	
2006-2007	345.7	-2	-691.4	4	267.8	
2007-2008	249.8	-1	-249.8	1	293.4	
2008-2009	249.8	0	0	0	319	
2009-2010	23.7	1	23.7	1	344.6	
2010-2011	66.7	2	133.4	4	370.2	
2011-2012	413.7	3	1241.1	9	395.8	
2012-2013	461.2	4	1844.8	16	421.4	
2013-2014	461.2	5	2306	25	447	**a=319**
2014-2015	454.2	6	2725.2	36	472.6	**b= 25.6**
2015-2016	699.1	7	4893.7	49	498.2	
2016-2017		8			523.8	
2017-2018		9			**549.4**	
2018-2019		10			**575**	
2019-2020		11			**600.6**	
2020-2021		12			**626.2**	
2021-2022		13			**651.8**	
Total	**4785.4**	**0**	**7193**	**280**	**8311.8**	

Source: indiastat.com

The above table -3 (i) shows the analysis of production trend in Madhya Pradesh from 2001-01 to 2015-16. The main spices produced in state are coriander, chilies, and garlic with high yields. The state leads in spices production with the largest production of garlic, accounting for 37% of the total national production. It is the second largest producer of coriander in the country. As in the data we can see that the production rate of the state has been increased in compare to the last 10 years.

Graph-3 (i): Trend analysis of 'Madhya Pradesh' from 2001-2002 to 2015-2016
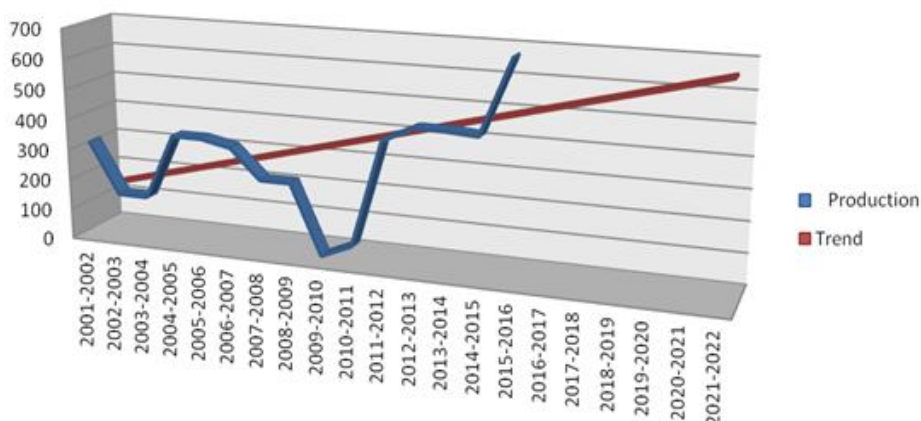
Above Graph-3 (i) shows the production of spices in Madhya Pradesh. The actual production line shows violent fluctuations. In 2014-2016 the production was highest due adequate climatic condition and proper use of modern techniques by the government. However, the production was least around 2010- 2011 due to poor climatic condition, drought and stress on use of latest technology. However, the production shows an upward trend in future.

3. (ii) Andhra Pradesh

Andhra Pradesh ranks first in the southern states of the country in production and productivity of coriander and ranks second in country. Coriander is cultivated in nearly31298 hectares in Andhra Pradesh with a production of 37548 metric tons.

Table-3 (ii): Trend Analysis of 'Andhra Pradesh' (2001-02 to 2015-16)

Year	Production	X	XY	X2	Trend	
2001-2002	888.3	-7	-6218.1	49	874.13	
2002-2003	887.6	-6	-5325.6	36	875.41	
2003-2004	722.8	-5	-3614	25	876.69	
2004-2005	722.8	-4	-2891.2	16	877.97	
2005-2006	920.5	-3	-2761.5	9	879.25	
2006-2007	1206.5	-2	-2413	4	880.53	
2007-2008	1235.2	-1	-1235.2	1	881.81	
2008-2009	471.8	0	0	0	883.09	
2009-2010	437.2	1	437.2	1	884.37	
2010-2011	1069.2	2	2138.4	4	885.65	
2011-2012	1129.3	3	3387.9	9	886.93	
2012-2013	1187.7	4	4750.8	16	888.21	
2013-2014	775.8	5	3879	25	889.49	a=883.9
2014-2015	918	6	5508	36	890.77	b= 1.28
2015-2016	673.66	7	4715.62	49	892.05	
2016-2017		8			893.33	
2017-2018		9			**894.61**	
2018-2019		10			**895.89**	
2019-2020		11			**897.17**	
2020-2021		12			**898.45**	
2021-2022		13			**899.73**	
Total	13246.36	0	358.32	280	18625.53	

Source: indiastat.com

The above table 3.(ii) shows the analysis of production in Andhra Pradesh. If we see the table above, the production of the spices in the state has varied from year to year. The growth of production has dropped down drastically in 2008-2009. Over all, the production from the state has been improved in last 15 years. The State Government of Andhra Pradesh has launched Primary sector mission during 2015-16 with the objective to achieve double digit inclusive growth. Accordingly, strategies were formulated for Agriculture & allied activities under primary sector mission to harness the untapped potentiality under primary sector mission.

Graph-3 (ii): Trend analysis of 'Andhra Pradesh' from 2001-2002 to 2015-2016
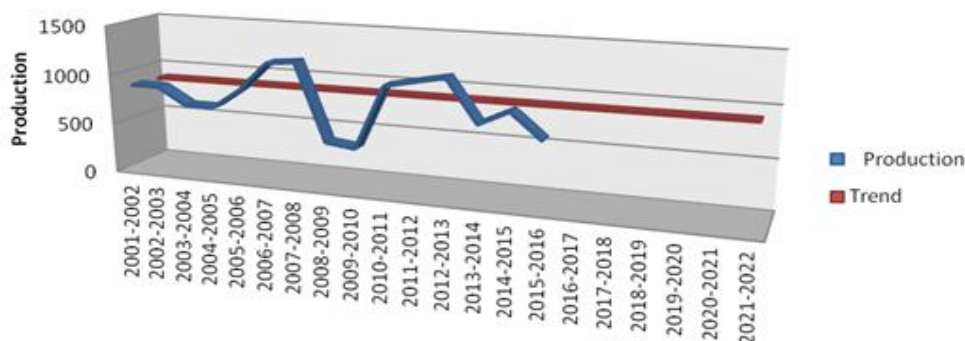
The above graph no- 3 (ii) depicts the production of the state Andhra Pradesh from 2001-2016. This graph indicates the violent fluctuation of production line which indicates a massive drop down in 2008- 09. These drops have occurred due to reduction in crop coverage. The major factors that affected the shift were and changing cropping patterns, vagaries in climate, non-on-availability of quality seed, terminal moisture stress and fluctuations in market prices. However, the production shows a constant trend in future.

The Andhra Pradesh horticultural department has come up with objectives to increase production and productivity by bringing additional area through diversification of traditional crops.

To improve the productivity of horticultural crops, with the use of high yielding / hybrid quality planting materials, by rejuvenation of old orchards & by adoption of improved package of practices etc.

4.3.3 (iii) Gujarat
The State has strong cooperative credit & marketing structure, along with 213 cold storages having 9.50 lakh mt. storage capacity About 42 fruit & vegetable co-operative marketing societies and 197 Agriculture Produce Market Committees (APMCs) dealing with selling & buying of horticulture produce in the State. Gujarat has achieved Agricultural Growth table at 9.6% and have carved a niche in the field of Agricultural Development in India. As of 2009, Gujarat's agriculture growth rate has been three times more than the national growth rate.

Table-3 (iii): Trend Analysis of Production in 'Gujarat' from (2001-2002 to 2015-2016)

Year	Production	X	XY	X^2	Trend	
2001-2002	137.3	-7	-961.1	49	199	
2002-2003	505.3	-6	-3031.8	36	252	
2003-2004	505.3	-5	-2526.5	25	305	
2004-2005	366.8	-4	-1467.2	16	358	
2005-2006	505.6	-3	-1516.8	9	411	
2006-2007	356.8	-2	-713.6	4	464	
2007-2008	356.8	-1	-356.8	1	517	
2008-2009	188.4	0	0	0	570	
2009-2010	188.4	1	188.4	1	623	
2010-2011	792.6	2	1585.2	4	676	
2011-2012	882.1	3	2646.3	9	729	
2012-2013	882.1	4	3528.4	16	782	
2013-2014	848.5	5	4242.5	25	835	**a=570**
2014-2015	1020	6	6120	36	888	**b=53**
2015-2016	1014.49	7	7101.43	49	941	
2016-2017		8			994	
2017-2018		9			**1047**	
2018-2019		10			**1100**	
2019-2020		11			**1153**	
2020-2021		12			**1206**	
2021-2022		13			**1259**	
Total	**8550.49**	**0**	**14838.43**	**280**	**15110**	

Source: indiastat.com

The above table–3. (iii) demonstrates the trend in production of past 15 years and the state has grown immensely in respect to late 90's. The production line depicts a gradual growth every year except in 2008-2010 which is the lowest in last 15 years.

The government envisages Agriculture promotion through focused agricultural research, and application of biotechnology, information technology and ecotechnology. Conservation of soil, water and biodiversity is the prime concerns to be environmentally sustainable.

Graph-3 (iii): Trend analysis of production in 'Gujarat' from (2001-02 to 2015-16)
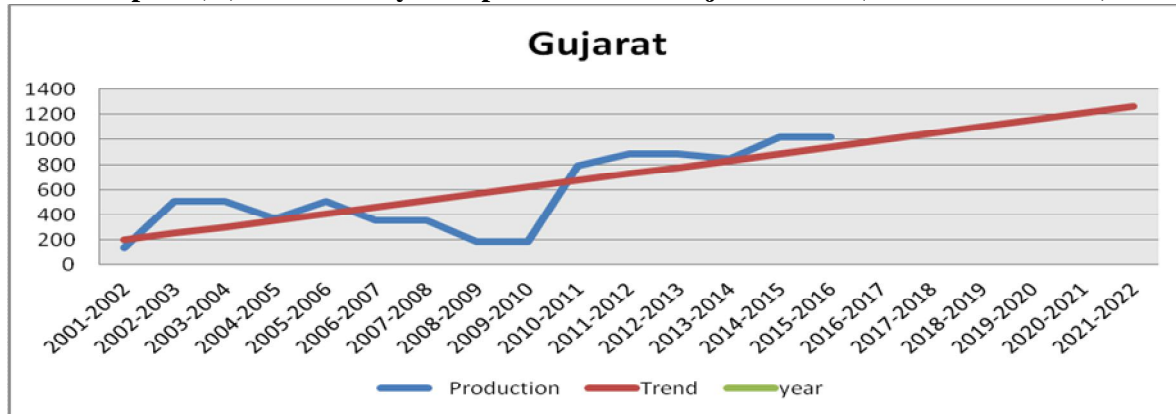
The above graph-3 (iii) exhibits the trend of production in Gujarat from 2001-02 to 2015-2016. The production line indicates a gradual growth in last 15 years. The state has improved in many perspectives including, growth in crop output, increase in value of the given output, diversification of agriculture towards high valued crops and livestock However, in 2009-2010 the production was the least due to water scares and groundwater over-exploitation.

Gujarat is one of the water-scarce regions of India with the per capita renewable water resource availability falling far below the 1700 m3 per annum mark.The reason is that the agriculture in the semi-arid and arid parts of the state is heavily dependent on normal monsoon not only as a source of critical moisture supply for kharif crops, but also as the source of recharge for the aquifers, as groundwater stocks are already exhausted.

However, the trend shows an upward shift in future.

3. (iv) Karnataka
The Karnataka State is the 8th largest State in the Country having an area of 1.91 lakh sq.mts and has been endowed with various Agro Economic conditions suitable for cultivation of almost all plant species existing on this Planet Earth. The State is predominantly an agriculture state. 24% of the total GDP is derived from agriculture sector. And 66% of the workforce is dependent on agriculture. 70% of the State's population is still living in rural areas and are completely depending on agriculture for their livelihood.

Table–3 (iv): Trend Analysis of Production in 'Karnataka' (2001-02 to 2015-16)

Year	Production	X	XY	X^2	Trend	
2001-2002	315.7	-7	-2209.9	49	292	
2002-2003	315.7	-6	-1894.2	36	297.3	
2003-2004	217.8	-5	-1089	25	302.6	
2004-2005	217.8	-4	-871.2	16	307.9	
2005-2006	619.8	-3	-1859.4	9	313.2	
2006-2007	345.1	-2	-690.2	4	318.5	
2007-2008	344.9	-1	-344.9	1	323.8	
2008-2009	80.6	0	0	0	329.1	
2009-2010	80.6	1	80.6	1	334.4	
2010-2011	460.4	2	920.8	4	339.7	
2011-2012	502.5	3	1507.5	9	345	
2012-2013	369.9	4	1479.6	16	350.3	
2013-2014	333.8	5	1669	25	355.6	
2014-2015	345.5	6	2073	36	360.9	**a=329.1**
2015-2016	387.62	7	2713.34	49	366.2	**b= 5.3**
2016-2017		8			371.5	
2017-2018		9			**376.8**	
2018-2019		10			**382.1**	
2019-2020		11			**387.4**	
2020-2021		12			**392.7**	
2021-2022		13			**398**	
Total	**4937.72**	**0**	**1485.04**	**280**	**7245**	

Source: indiastat.com

The above table- 3(iv) examines the trend of production from 2001-2016. The production line shows a drastic movement throughout the years. The production was highest around 2005-2006. However, the production drastically dropped in the year 2008-2010 due to adverse weather conditions. The area under pepper in the country has dropped from 2.18 lakh hectares in 2002 to 1.71 lakh hectares in 2012, before staging a marginal recovery.

While reviewing the sector, there is an urgent need for the creation of post-harvest infrastructure facilities in the state to add value to farmers' produce, increase shelf life, reduce wastage, and increase exports, all leads to better income to farmers.

Graph–3 (iv): Trend Analysis of Production in 'Karnataka' from (2001-2002 to 2015-2016)
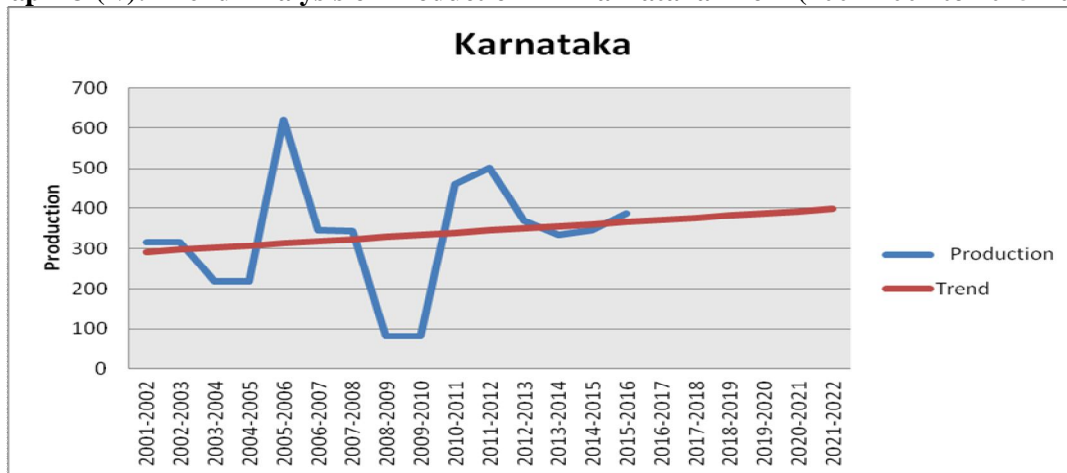
The above graph - 3 (iv) depicts the trend of production from 2001-2016. The graph shows an extreme movement throughout the years. The production is lowest from 2009-2010 due to poor climatic condition. The major agricultural issues faced by the state is inadequate post-harvest infrastructure facilities like procurement centers, grading, packing units, refrigerated transport, processing units and an export house.

Lack of quality seeds, insufficient power in rural areas and Subdivision, fragmented land holdings because of which mechanized cultivation is not possible. However, the trend line shows a constant shift in future.

3. (v) Kerala

The spices of Kerala date back to thousands of years in the history of the state. Kerala has over 2, 52,660 hectare of land under spice cultivation. With an estimated production volume of approximately 1, 37,862 tonne, the southern state is one the largest spice-producing regions in the country, according to figures for 2011-12.

Table-3 (v): Trend Analysis of Production in 'Kerala' (2001-2002 to 2015-2016)

Year	Production	X	XY	X²	Trend	
2001-2002	151.6	-7	-1061.2	49	109.44	
2002-2003	151.6	-6	-909.6	36	113.02	
2003-2004	158.3	-5	-791.5	25	116.6	
2004-2005	158.3	-4	-633.2	16	120.18	
2005-2006	191.8	-3	-575.4	9	123.76	
2006-2007	168.2	-2	-336.4	4	127.34	
2007-2008	159.3	-1	-159.3	1	130.92	
2008-2009	69.9	0	0	0	134.5	
2009-2010	72	1	72	1	138.08	
2010-2011	113.1	2	226.2	4	141.66	
2011-2012	112.8	3	338.4	9	145.24	
2012-2013	128.9	4	515.6	16	148.82	
2013-2014	114.1	5	570.5	25	152.4	
2014-2015	140.2	6	841.2	36	155.98	**a=134.5**
2015-2016	128.4	7	898.8	49	159.56	**b=3.58**
2016-2017		8			163.14	
2017-2018		9			**166.72**	
2018-2019		10			**170.3**	

2019-2020		11			173.88	
2020-2021		12			177.46	
2021-2022		13			181.04	
Total	**2018.5**	**50**	**-1003.9**	**280**	**3050.04**	

Source: indiastat

The above table –3.(v) shows the production of 2001-2016. It depicts the constant growth of the production in till 2001-2008. However, the production dropped drastically in 2008-2010 as the area under spice cultivation in Kerala has declined from 2, 58,932 hectare in 2008 and insufficient monsoon showers also led to decline in production. However, the production has kicked up gradually from 2011. The Spices Board, however, is hopeful of a turnaround in the scenario. It has now begun to focus on replanting and rejuvenation of pepper farms, farm mechanisation and train growers on various aspects of production.

Graph–3 (v): Trend analysis of production in 'Kerala' (2001-2002 to 2015-2016)
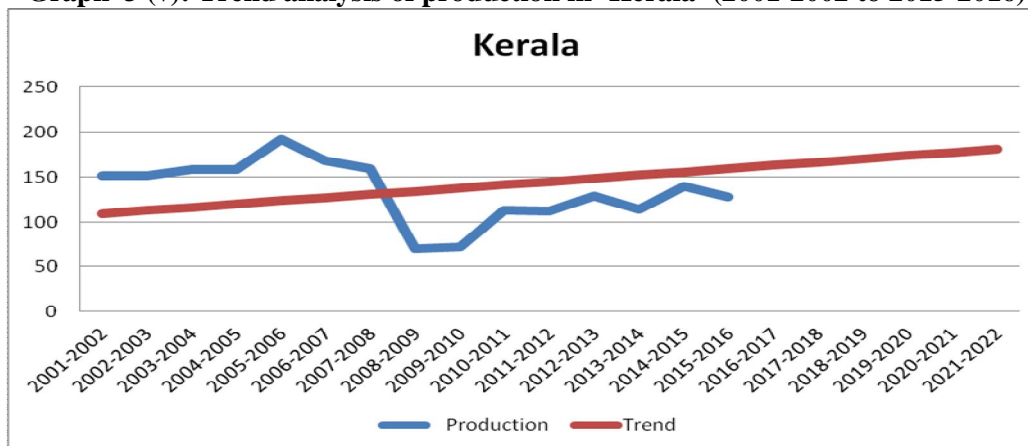
The above graph- 3 (v) indicates the tremendous shift in production of spices in Kerala. Lack of quality planting material, small and marginal holdings, existence of senile and unproductive vines and pest and diseases are one of the major causes of production decline. However, from past 4 years the production is gradually recovering and necessary measurements for the same has been introduced by the government.

The Spice Board of India – which is based in Kochi – has launched a special purpose fund for the replantation and rejuvenation of the spice. It has launched the Export-oriented Production and Harvest Improvement Program. The objectives of these programs are to improve the productivity and quality of cardamom and post-harvest improvement of spices at the farm level, and encourage organic production of spices, amongst others.

3. (vi) Orissa

Orissa is an Agrarian State. Almost 70 per cent population of the State is dependent on agriculture. The agriculture sector contributes only about 26 per cent of the Gross State Domestic Product (GSDP), with more than 70% population dependence resulting in low per capita income in the farm sector. The public investment in agriculture has been declining and is one of the main reasons behind the declining productivity and low capital formation in the agriculture sector. Private investment in agriculture has also been slow and must be stimulated through appropriate policies

Table–3 (vi): Trend Analysis of Production in 'Orissa' (2001-2002 to 2015-2016)

Year	Production	X	XY	X^2	Trend	Column1
2001-2002	250.4	-7	-1752.8	49	140.26	
2002-2003	250.4	-6	-1502.4	36	145.48	
2003-2004	216.5	-5	-1082.5	25	150.7	
2004-2005	216.5	-4	-866	16	155.92	
2005-2006	195.3	-3	-585.9	9	161.14	
2006-2007	199.2	-2	-398.4	4	166.36	
2007-2008	199.2	-1	-199.2	1	171.58	
2008-2009	18.5	0	0	0	176.8	
2009-2010	18.5	1	18.5	1	182.02	
2010-2011	174.7	2	349.4	4	187.24	
2011-2012	187.5	3	562.5	9	192.46	

Year	Production	X	XY	X^2	Trend	
2012-2013	181.5	4	726	16	197.68	**a=176.8**
2013-2014	181.5	5	907.5	25	202.9	**b= 5.22**
2014-2015	181.5	6	1089	36	208.12	
2015-2016	181.5	7	1270.5	49	213.34	
2016-2017		8			218.56	
2017-2018		9			223.78	
2018-2019		10			229	
2019-2020		11			234.22	
2020-2021		12			239.44	
2021-2022		13			244.66	
Total	**2652.7**	**0**	**-1463.8**	**280**	**4041.66**	

Source: indiastat.com

The above table- 3(vi) shows the production line being constant. However, in 2008-2009 the production level has been drastically dipped. Agriculture in Orissa continues to be characterized by low productivity due to traditional agricultural practices, inadequate capital formation and low investment, inadequate irrigation facilities, low water use efficiency, uneconomic size of holding, etc.

Presently, the extension work is being done by the institutions in the public domain. Emphasis will be laid on promoting farmers to farmers learning by setting up Farm Schools in the field of progressive farmers.

Graph-3(vi): Trend Analysis of Production in 'Orissa' (2001-2002 to 2015-2016)
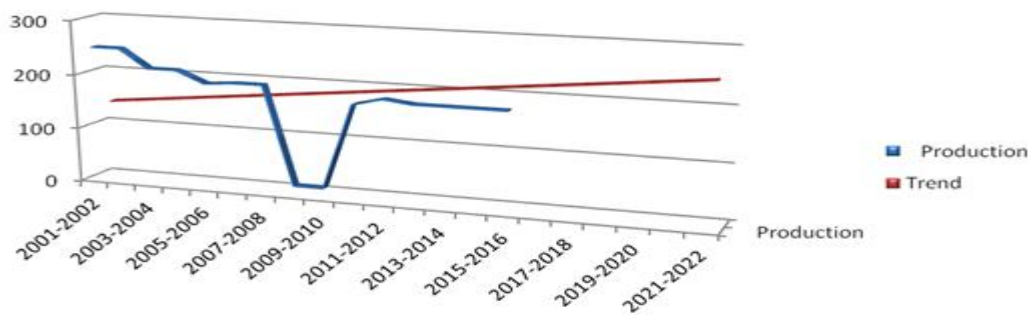
The above graph - 3(vi) depicts the trend of production in Orissa. The production line shows normal growth and constant production rate in the state. However, the production was lowest in 2009-2010. This is due to traditional agricultural practices. This knowledge deficit needs to be overcome speedily to enhance farm productivity and profitability.

The agricultural department of the state has stated that the Emphasis will be laid on promoting farmers to farmers learning by setting up Farm Schools in the field of progressive farmers.

The production of quality planting materials and seeds on a sufficient scale is a major pre-condition to the promotion of horticulture crops in the State. In order to increase production of quality planting material at least one Model (big) Nursery will be set up in each district and one Small. However, the production is showing an upward trend in future.

3. (vii) Rajasthan

Rajasthan is the largest state of India having different weather and soil conditions consisting of different agro-climatic situations which help, the state for diversified cropping pattern. In Rajasthan major spices grown are Ajwan, Chilly, Cumin, Fenugreek, Coriander, Garlic, Ginger and Turmeric. The climatic conditions prevailing in Rajasthan is very much conducive for growth and development of wide range of seed spices.

Table-3 (vii): Trend Analysis of Production in 'Rajasthan' 2001-2002 to 2015-2016

Year	Production	X	XY	X^2	Trend	
2001-2002	616.4	-7	-4314.8	49	995.08	
2002-2003	616.4	-6	-3698.4	36	957.8	
2003-2004	2127.8	-5	-10639	25	920.52	
2004-2005	2127.8	-4	-8511.2	16	883.24	
2005-2006	297.1	-3	-891.3	9	845.96	
2006-2007	361.4	-2	-722.8	4	808.68	

2007-2008	520.6	-1	-520.6	1	771.4	
2008-2009	10.3	0	0	0	734.12	
2009-2010	12.1	1	12.1	1	696.84	
2010-2011	668	2	1336	4	659.56	
2011-2012	871.6	3	2614.8	9	622.28	a=734.12
2012-2013	870.9	4	3483.6	16	585	b= -37.28
2013-2014	674.8	5	3374	25	547.72	
2014-2015	618.3	6	3709.8	36	510.44	
2015-2016	618.32	7	4328.24	49	473.16	
2016-2017		8			435.88	
2017-2018		9			**398.6**	
2018-2019		10			**361.32**	
2019-2020		11			**324.04**	
2020-2021		12			**286.76**	
2021-2022		13			**249.48**	
Total	**11011.82**		**-10439.56**	**280**	**13067.88**	

Source: indiastat.com

The above table- 3 (vii) shows the production of spices in Rajasthan from 2001-2016.It depicts an enormous fluctuation in the production sector. In 2003-2005 we can see a huge hike in the production which is obtained by increase in the area of spice cultivation in the state from 762'000 hectare to 2447'000 hectare. From 2008-2010 the production rate has been declined tremendously. This is due scanty rainfall and inefficient water management in the state. Non availability of high yielding disease resistant varieties causes the low productivity of seed spices.

The higher production can be achieved easily through higher yields by better application of cultural practices, biotic stress management and putting more area under these crops.

Graph-3 (vii): Trend Analysis of Production in 'Rajasthan' 2000- 2001to 2015- 2016
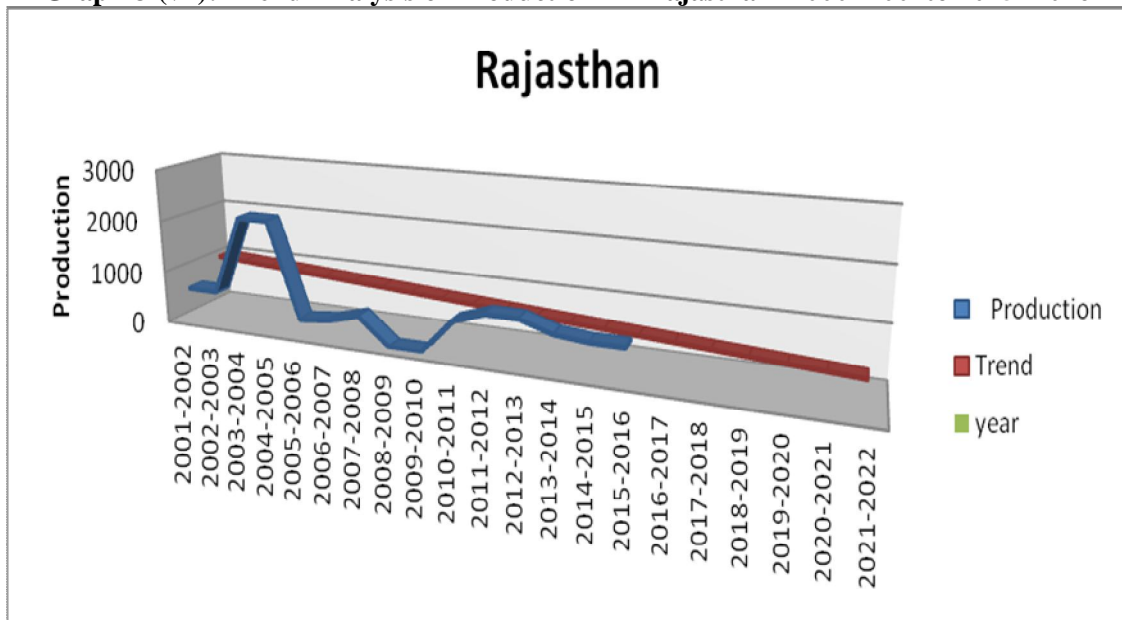
The above graph - 3(vii) shows the trend of production in Rajasthan. As in the graph the production line shows an immense shift from production being in the highest from 2003-2005 and lowest being in 2008-2010. Lack of proper training to the seed spices growers, traders, processors and exporters and socio-economic constraints results in inadequate yields. There is lack of quality management. For increasing the overall system productivity, the challenge is to appropriately reduce the cost of cultivation.

Many production technologies have been generated under All India Co-ordinate Research Project on Spices and National publication efforts have been made to present specific recommendations in the form of technologies for increasing the profitability of coriander, cumin fennel, fenugreek ajowan, dill, nigella, anise, celery.

The production shows a downward trend in the future.

4. Total Percentage share of top seven states producing spices in India (2001-2002 to 2015-2016)

Table-4.1: Top Seven Spice Producing States in India (2001-2002 to 2015-2016)

Year	Madhya Pradesh	Andhra Pradesh	Gujarat	Karnataka	Kerala	Orissa	Rajasthan	Others
2001-2002	6.73	6.7	1.6	6.39	7.51	9.44	5.59	3.29
2002-2003	3.19	6.7	5.9	6.39	7.51	9.44	5.59	3.29
2003-2004	3.19	5.45	5.9	4.41	7.84	8.16	19.32	3.48
2004-2005	7.65	5.45	4.28	4.41	7.84	8.16	19.32	3.09
2005-2006	7.65	6.94	5.91	12.55	9.5	7.36	2.69	5.84
2006-2007	7.22	9.1	4.17	6.99	8.33	7.51	3.28	3.97
2007-2008	5.22	9.32	4.17	6.98	7.89	7.51	4.72	3.86
2008-2009	5.22	3.56	2.2	1.63	3.46	0.69	0.09	12.22
2009-2010	0.49	3.3	2.2	1.63	3.56	0.69	0.1	11.7
2010-2011	1.39	8.07	9.26	9.32	5.6	6.58	6.06	6.18
2011-2012	8.64	8.52	10.31	10.17	5.58	7.07	7.91	6.72
2012-2013	9.63	8.96	10.31	7.49	6.38	6.84	7.9	6.19
2013-2014	9.63	5.85	9.92	6.76	5.65	6.84	6.12	9.41
2014-2015	9.49	6.93	11.92	6.99	6.94	6.84	5.61	8.15
2015-2016	14.61	5.08	11.86	7.85	6.36	6.84	5.61	9.8

The table-4.1. indicates that spice production in Rajasthan is making small but effective strides to emerge as one of the India's largest spice producing state. Its achievement has been particularly noteworthy in the agricultural sector keeping in mind the scarcity of water in the   in the area of spice cultivation in the state from 762'000 hectare to 2447'000 hectare.

Orissa's agriculture sector contributes only about 26 per cent of the Gross State Domestic Product (GSDP), with more than 70% population dependence resulting in low per capita income in the farm sector. However, the production rate has been constant in the state.

The production dropped drastically in 2008-2010 as the area under spice cultivation in Kerala has declined from 2, 58,932 hectare in 2008.

Coriander is cultivated in nearly31298 hectares in Andhra Pradesh with a production of 37548 metric tons. The growth of production has dropped down drastically in 2008-2009. Over all, the production from the state has been improved in last 15 years.

Gujarat has achieved Agricultural Growth table at 9.6% and have carved a niche in the field of Agricultural Development in India. As of 2009, Gujarat's agriculture growth rate has been three times more than the national growth rate.

The Karnataka State is the 8th largest State in the Country having an area of 1.91 lakh sq.mts The State is predominantly an agriculture state. 24% of the total GDP is derived from agriculture sector.

Graph-4.1: Top Seven Spice Producing States in India from the year 2001-2002 to 2015-2016
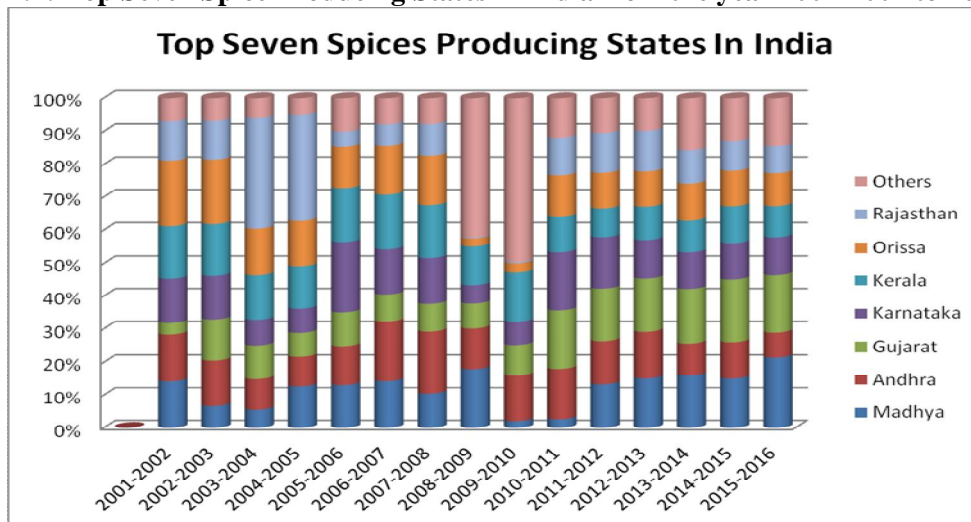
Graph 4.1: Depicts the percentage contributions of top seven states to total spices production. Some of the major factors affecting production are insufficient water management, unavailability of quality seeds, use of traditional techniques etc. The higher production can be achieved easily through higher yields by better application of cultural practices, biotic stress management and putting more area under these crops.

CONCLUSION

India is one of the oldest and largest producer and exports spices which contribute to Indian economy. Among the horticultural crops, spices play a dominant role in India GDP. The demand for spices and its products are ever increasing both in the internal and external markets. Several kinds of spices are grown in India since time immemorial, it is because of this he country is known to the world as "The Home of Spices". Although there is tremendous importance of spices, it is rather unfortunate that the sector has not achieved the required level development because of the problems in the marketing, supply chain, exports, pre-and post-harvesting activities. A targeted effort is needed to include poorer households in value chain, organizational development, technical upgrading, management skills and access to financing are all required.

REFERENCE

Books

i) BadurAlamIqbal, Indian Spices Genre Publications – 1982

ii) Mohamed Tufal Khan, Spices in Indian Economy, Acadamic Foundation – 1990

iii) Dr. H.K. Bakhru, Indian Spices Condiments and Natural Healers, JaicoPublisingHouse – 2001

iv) Mrs. DevikaPrimic, The Simple Users of Herbel Teas and Indian Spices, Gnre Publication – 2014

Weblinks

- http://www.indiastat.com/agriculture/2/spices/262/totalspices/19563/stats.aspx

- www.indianspicesociety.in

- http://indianspices.com/sites/default/files/majorstatewise%20areaproduction%202016.pdf

- http://agriexchange.apeda.gov.in/indexp/reportlist.aspx

- http://nhb.gov.in/annual_report.aspx?enc=3ZOO8K5CzcdC/Yq6HcdIxOBX3ZfjXi13RgCoILztD0k

- www.thespicejournal.com

"INTERNAL STRUCTURE OF URBAN CENTRE: A CASE STUDY IN TINSUKIA TOWN" ASSAM

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ABSTRACT

Man's activities and various uses which are carried on land including its characteristics of location and type and design of human development are the main bases of urban land classification. The different parts of an urban area have concentration of different functions developing spatial variations to the urban landscape. The spatial variations in land use are the product of a large number of forces active in an area (Carter, 1972).

Tinsukia Town located in the eastern part of Assam and North East India is also experiencing a high rate of urbanization in regional context. Agrarian occupational pattern of the region goes slowly changed from the time of British period through immigration of people in business and service sectors. They use to concentrate their activities in growth points of railway stations, mining sides, rural markets and military cantonment areas ultimately giving birth of urban centres. The study of internal structure of urban centres: A case study in Tinsukia Town may shows a significant change of the town through proper planning and management that reflected in the spatial organization of urban centre resulted out of geographical, economic and social forces. In this paper attempt has been made to find out the development of urbanization in relation to internal structure of the town. The study reveals that the city in its initial phases of development did grow around a focal point located in the old railway station. Later, sectors of different activities have developed not from a single point but from several points. This study is mainly descriptive method and based primarily on secondary data collected from census of India 2001-2011.

Keywords: Activities, business, internal structure, service sectors, social forces, urbanization

INTRODUCTION
The urban areas occupy a nodal position in the socio-economic development process of a region. The growth of an urban area obviously depends greatly on its functionality, degree of interaction with neighboring areas and the dynamism. The internal structure holds the key for development of any city. Internal structure study is concerned with the physical qualities of the urban environment identifiable in the whole town plan. Tinsukia has the highest concentration of commercial activities and land use. Activities such as retail shops, wholesale trade, hotels, ware housing, etc. In Tinsukia, 7.04 % of the developed land is given to commerce. Eastern region or CBD of Tinsukia has highest concentration of commercial land use. Wholesale trade mainly growth in the central area. The retail sale trade is also developed mainly in the town centre and along the National Highway. Commercial activity is increasing very fast and number of hotels gives an idea about the influx of people to the town mainly due to commercial activity. In Tinsukia town committee area, residential area is the predominant land use occupying about 65.P.C.of the developed area. The residential areas are developed in a much unplanned manner with very narrow road and without any proper drainage facilities. Almost all the residential areas of the municipal town (except areas developed by T.D.A) are thickly populated and further re-densification without doing urban renewal will lead to chaos. Middle income group people live there with low residential amenities with high population density. With this objectives and rationale in mind, the topic of "Study Area: Internal structure of urban centre: A case study in Tinsukia Town"Assam is taken for investigation. It will attempt to find out the character of growth and development of urbanisation through the study of its structural process and pattern along with impact on regional development.

STUDY AREA
Tinsukia is a town and municipal board in Tinsukia district, Assam, India is located in between 27□31□ N latitude and 95□35□ E longitude in eastern most part of Assam south of the Brahmaputra. It covers a total area of 20 km2 consisted mostly of plains with 99,448 population according to 2011 census. It is the administrative headquarter of Tinsukia District of Assam, India. It contains a mixture of indigenous Assamese communities and Hindi Speaking people. The city was built in the middle of the present city of Tinsukia. It declared the 23rd district of Assam on 1st October 1989 when it was split from Dibrugarh. The town started to grow in and has been growing since 1883, starting with a humble railway station, the urban centre takes more than a hundred years to attain at the present shape and size.

OBJECTIVES
1. To know about element of the internal structures of urban centres

2. To study about internal variations in population density

3. To examine the computable of theories in Tinsukia town

METHODOLOGY
This study is mainly descriptive method and based primarily on secondary data collected from census of India 2001-2011. Land value data are collected from Tinsukia circle office. Library work done to find out relevant information in books, journals, articles, monographs, etc and also assembling personal experiences. Theoretical knowledge and imaginations, opinion, observation in the field. Simple statistical method is used to examine the land value surface pattern and analysed for clear understanding of Tinsukia town.

RESULTS AND DISCUSSION
Land value surface pattern as element of internal structure
Land value is an important economic indicator to assess the spatial internal structure of an urban centre. Urban land use pattern influences the development of its structural pattern. The land value surface is essentially a reflection of accessibility within the urban area (Knowles and Wareing, 1993). Land value is always maximum at the city centre and decline by varying rates in different directions from the centre. Secondary peaks of high value occur at major traffic intersections. In a study of urban centre in Tinsukia Town, identified factors which influence the land value surface, these are (i) distance from the Central Business District (CBD) (ii) distance from the nearest regional shopping centres (iii) proximity to an elevated-subway line (iv) proportion of population density (v) distance from transport service centre.

Table-1: Tinsukia Town, Land value per sq.ft

| Town/Ward	Trade Side (value in Rs. per sq. ft)				Residential Side (Rs./sq.ft)		
Tinsukia	Special Trade Side	I	II	III	I	II	III
1	1000.00	-	500.00	300.00	300.00	250.00	150.00
2	-	-	500.00	300.00	300.00	250.00	150.00
3	1000.00	700.00	500.00	300.00	300.00	250.00	150.00
4	1000.00	700.00	500.00	300.00	300.00	250.00	150.00
5	-	-	600.00	400.00	250.00	200.00	150.00
6	1000.00	900.00	700.00	500.00	500.00	350.00	150.00
7	-	600.00	400.00	250.00	250.00	200.00	150.00
8	-	600.00	400.00	250.00	250.00	200.00	150.00
9	1200.00	600.00	400.00	250.00	250.00	200.00	150.00
10	1200.00	900.00	700.00	500.00	500.00	350.00	150.00
11	1200.00	900.00	700.00	500.00	500.00	350.00	150.00
12	1200.00	900.00	700.00	500.00	500.00	350.00	150.00
13	1200.00	900.00	700.00	500.00	500.00	350.00	150.00
14	-	600.00	400.00	250.00	250.00	200.00	150.00
15	-	600.00	400.00	250.00	250.00	200.00	150.00

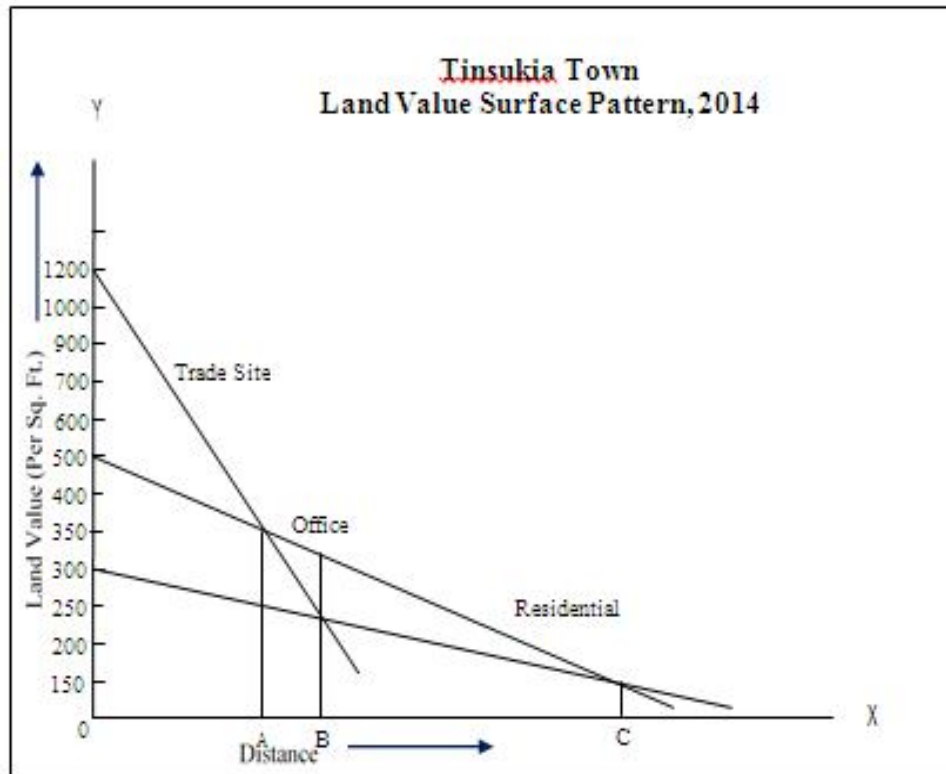Source:-Tinsukia Circle Office 2014
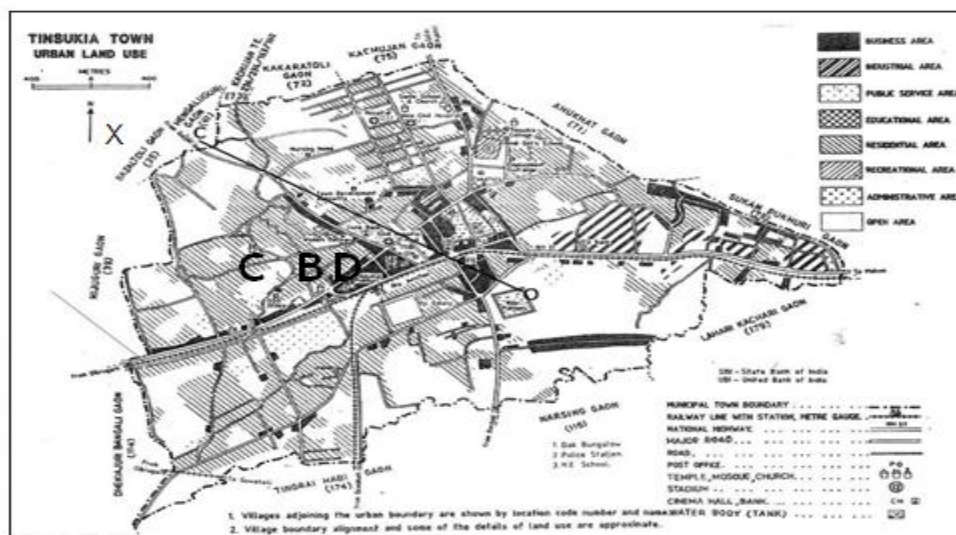
Fig-1

Fig-2

Land value surface co-ordinating profile of Tinsukia Town based on table- 1 and fig- 1

Trade site land values are high but have high ranges, whereas office used lands are very low with moderate range and residential lands have low value with low range are the characteristics of Tinsukia.

INTERNAL STRUCTURE OF CENTRAL BUSINESS DISTRICTS (CBD)
The Central Business District, Commercial core, and Primary Commercial Area are the hub of the commercial activities. It represents the retail heart of a city. Land value and shop rents are highest in this part of the city. It experiences great congestion and heavy rush of people during day time. It serves the customers coming from the city and its surrounding region.

Central Business Districts of Tinsukia Town is identified on the basis of wholesale and storage activities. They command wholesale activities and serve surrounding region of North- East India. But all the urban centres have some main business area with shops and commercial establishment at the heart of the town.

The pattern of CBD of Tinsukia is changing. The CBD of Tinsukia is found dominant for the whole of Dibrugarh and Tinsukia District region including Dibrugarh in some respects. The CBD pattern of it is noticed slightly changing and the centre of business gravity also noticed slow changing. Though Dibrugarh being older than Tinsukia now Tinsukia becomes the sole commanding commercial business point due to its commanding communication facilities.

Retail marketing covers most of the Town. The town is retail point commanding from all the urban centres of Tinsukia District. As wholesale and retail services consist the CBD, every urban centres in the region has areas of CBD small or big with big buildings gathering along transport and traffic lines. The skyline shape of buildings varies from urban centre to urban centre.

RESIDENTIAL AREAS
Gradation of Residential Areas in Tinsukia Town
(a) Areas of high land value (Over Rs. 500/sq. ft.) :-The central part of Tinsukia Town located along the railway line and N.H.37 where the land values are high (Fig- 3). The central parts of the city comprising parts of wards nos 6,10,11,12 and 13 are located in and around the commercial core of the city. In this part of the town, availability of land for sale is relatively very low, the value of commercial and residential land is high. Moreover, conversion of residential area into commercial area also enhances the value of residential land in the interior parts of the town. The value of residential land is also high in parts of wards no 6,10,11,12 and 13 due to central location, nearness to the main commercial hub, low availability and high demand of land for residential purpose.
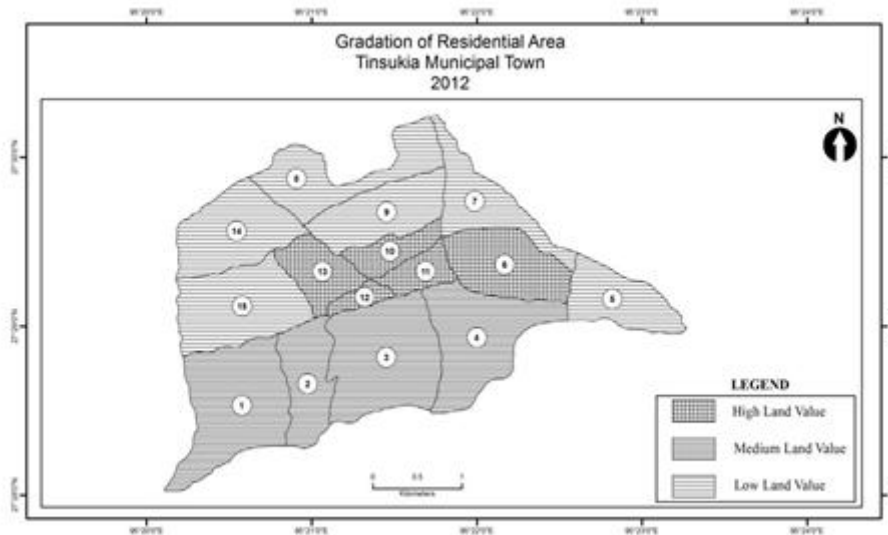
Fig- 3

(b):- Areas of Moderate to High Land Value (around Rs.350/sq. ft.):- The value of residential land is moderate in parts of wards no 1,2,3,4 because of the presence of industrial units, wholesale grain market and partially available civic amenities are the factors responsible for moderate to high value of residential land in southern part of Railway line and National High Way 37.Availability of civic amenities, nature of adjacent public places and low land are the topography factors that produce spatial variations in the residential land values in this area

(c):- Areas of Low to Moderate Land Value (around Rs. 250 /sq. ft.):- The value of land is low in parts of wards no 5,7,8,9,14 and 15.There is a continuous belt of low land value in the northern parts due to the distance of the main commercial markets, bus stand, railway station, educational institutions, govt. hospitals, poor transport and other amenities are the reasons behind the low value of residential land in the outgrowths. Moreover, easy availability and less competition among the buyers have also reduced the value of land. Poor topography is also another reason of low value of residential land in the outer limits of Tinsukia Town.

INTERNAL VARIATIONS IN POPULATION DENSITY

Ward wise population density in Tinsukia town exhibit four distinct density areas of very high, high, moderate and low. The figs - 4 and 5 reflect that the old and early occupied parts which are the main CBD of the city centre of Tinsukia town is thickly populated. Population density is low in the outer parts of the city centre. It can be generalised that the population density goes on decreasing as we move from interior to outer parts of the city centre. It is also appeared that the density is going on increasing and changing from moderate to high or low to moderate as time elapsed.

Table-2: Tinsukia Town, Density of population-2001 and 2011

Ward Nos	Area /km^2	2001		2011	
		Population	Density / km^2	Population	Density/ km^2
1	1.19	8,251	6,934	10,096	8,484
2	0.62	4,985	8.040	4,391	7,082
3	1.32	11,104	8,412	13,714	10,389
4	1.10	3,189	2,899	5,410	4,918
5	0.61	4,058	6,652	4,719	7,736
6	0.80	4.052	5,065	4,711	5,889
7	0.67	5,129	7,655	6,681	9,972
8	0.76	3,884	5,111	3,628	4,774
9	0.74	8,299	11,215	9,021	12,191
10	0.28	5,681	20,289	6,090	21,750
11	0.25	4,354	17,416	4,943	19,772
12	0.12	1,128	9,400	852	7,100
13	0.44	6,343	14,416	6,547	14,880
14	0.74	3,129	4,228	4,352	5,881
15	0.90	1,1977	13,308	14,283	15,870

Source: Town and country planning office Tinsukia, Census of India 2001 and 2011
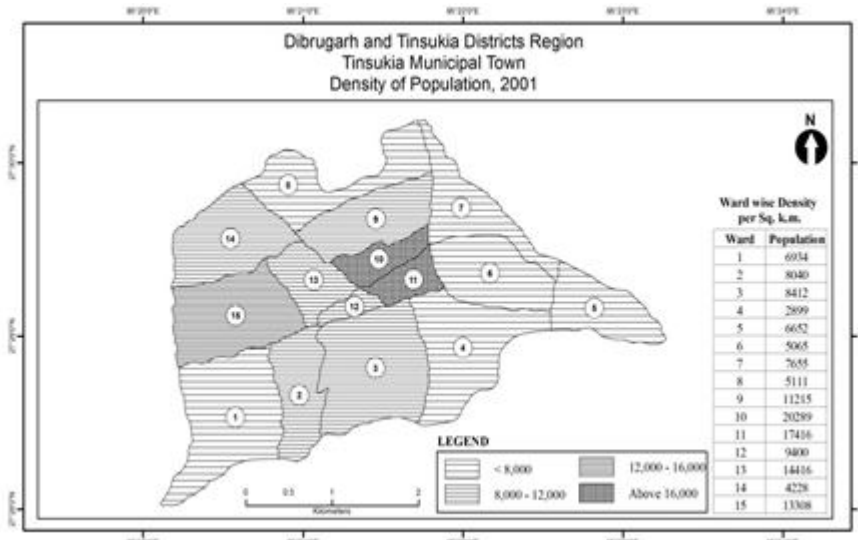
Fig-4
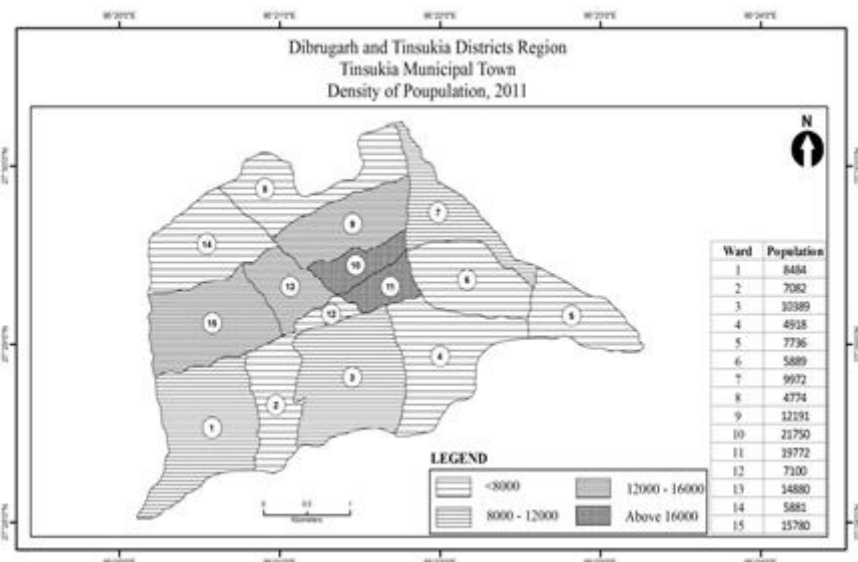
Fig-5

SECONDARY SHOPPING CENTRES

Secondary Business Centres also deals with similar commodities as that of Central Business Districts with a difference that volume of business is limited in secondary shopping centres. It also exerts its influence beyond city limits like that of central business area.The secondary shopping centres at Makum Road, Napukhuri area, Senairam school area, Dhekiajuri, etc. in Tinsukia.

HYPER MARKET

A recent development in many countries has been the opening of carefully planned out- of-town, shopping centres in which a wide range of goods and services are available in a single gigantic complex serving populations of 2,50,000 or more (Knowles and Wareing, 1976).

In Tinsukia Town such type of small shopping centres or shopping malls now has been developed in recent years mainly in Bishal Mega Mart and ATC Mall in Tinsukia town. This type of market seeks to change traditional shopping patterns by attracting customers from distance or of local who will make relatively frequent visit, to purchase bulk items which are normally bought locally on a weekly or even more frequent basis from scattered markets.

INDUSTRIES IN URBAN CENTRES

Urbanisation has been closely connected with industrialization. Tea, coal and petroleum, are at present the only large scale industries in Tinsukia Town. A large number of small and cottage, rice, atta, light manufacturing industries are growing in Tinskia town and adjoining areas. It is seen that industries of metal products, iron furniture, tea machinery and other machinery, plywood, wooden product are the main industries. These are developed either due to availability of raw materials at cheap rate or the demand of the product in the

hinterland. However, industries engaged in food product are also increasing in the Town. Besides, a large number of the gardens exist there are also innumerable small tea-growers in the region. Due to the imposition of restrictions by Government on the felling of tree (timber cutting), this sector (plywood and timber) has been closed. The District has a good number of cottage cane industries of bamboo and a sizeable portion of population is engaged in these industries.

INDUSTRY IN SUBURBS

Suburban industry typically shows a greater degree of order and planning than that of the inner city. The products of Suburban industry are extremely varied. There are tremendous scopes for Industry for manufacturing tea garden implements, hardware like bolts, nuts, screws, grill, etc. Other possibilities are non-ferrous utensils units, wire band industries, castings and foundry and general engineering industries in suburban areas in the Tinsukia Town. Thus suburb industries has an impact on urbanization. Tinsukia has notable suburb series of industries in Makum Road, Borguri industrial colonies, proposed plastic park at Natun gaon area and other industries some of which supply goods from national to international market too.

URBAN PLANS AND STRUCTURE MODELS

The growth of an urban centre, town or city depends on the various functions performed within the town. In fact, the growth of urbanization starts from a focal point, this focal point may either be a business or a public centre which attracts people to settle around it either in a circular or in a sectoral way. There are some theories put forward by urban geographers regarding the growth of urban settlements. These are concentric circle theory by Burgess, sectoral theory by Hoyt and Multi-Nuclei theory by Harris and Ullman. The first two theories believe in growth of settlements from a single focal point, whereas the last one believes in the development of settlement round several nuclei. An attempt has been made here to see whether. Tinsukia Town structural pattern of population fits with the above mentioned types of urban development.

It is observed that the pattern of urbanization in developing countries is quite different from developed countries. The mode of study of unban centres too based on western theoretical and methodological models exhibits limitations when applied in developing countries which have totally different mode of society, economy, history and urban form. The main features of urbanisation in developing countries are that the pace of urbanisation has not been proportional to the pace of industrialisation. Many scholars have called it "sub standard urbanisation." The main criterion for this, our cities suffers from the problem of high density of population, unemployment and also has high proportion of unproductive professionals unsuitable for western urbanisation.

On this perspective, the urban development of Tinsukia Town is found in its initial phases of development did grow around a focal point located in the OLD RAILWAY STATION area of Tinsukia. Hence, urban development of the Town is not compatible with Burgess's theory of concentric circle development. It may be said that the region development pattern is limitedly compatible with Hoyt's theory of sectoral development to some extent. This is because, Hoyt stresses on one focal point i.e. CBD from where urban development takes place in sectoral forms. In Tinsukia Town, sectors of different activities have developed, converged and combined not from a single point but from several points. So Hoyt's theory is only partially applicable to Tinsukia Town regional urban growth. However, the regional urban growth fits better with the Multi-Nuclei model theory of Harris and Ullman. By the end of the 19th century commercial nucleus developed near railway station and central market in Tinsukia Town because of its favourable location and railway development. Further with the development of tea gardens, industrial establishments at Digboi, Duliajan Naharkatia, Namrup, these nuclei developed rather rapidly and haphazardly leading to a high concentration of population around these nuclei.

CONCLUSION

The studies on the internal structures of urban centre in Tinsukia Town, we may find that land value surface declines more steeply from the centre towards periphery in Tinsukia town. Near railway station and central market are the central business centres in the town. They command not only the town but also surrounding region of North East India. In the town of Tinsukia more land of the urban area in general, is devoted to residential use than any other use. Highest population density is seen in CBD area of the city. When development of urban centre in the town is analyzed it is found that the city in its initial phases of development did grow around a focal point located in the old railway station. Later, sectors of different activities have developed not from a single point but from several points. The centre is marked by changes in population and concentration of public utility services. Trade and commercial activities have also increased in the centre. Modern transportation has changed their appearance. All these indicate that the growth of any urban centre is not due to a single function rather it is the results of cumulative effect of several forces, all of which of stimulate different activities and functions.

BIBLIOGRAPHY AND REFERENCES

1. Bhattacharyya, N.N. (1979): "Central places of Darrang District, Assam" in The North Eastern Geographer Vol XI, No1 and 2,1979 G.U.p71

2. Borah, J. (1985): Spatial Structure of Urban Influence in the Neighbouring Area of Gauhati, Inter India Publications, New Delhi

3. Borooah, G.L. (1985) Population Geography of Assam; A study of Dibrugarh district, Mital Publications Delhi- P- 119.

4. Burgess, E.W. (1925): "The Growth of City," In R.E. Park, E.W.Burgress and Roderick, D. Makenjee (ed) University of Chicago.

5. Carter, H. (1974): The Study of Urban Geography, Edward Arnold, London P-171. Census of India 1971 Series 3 Assam part X-A & Town Directory. – Lakhimpur District.

6. Census of India 1981 Part XIII-A Village & Town Directory – Dibrugarh –XI

7. Census of India 2001, 2011 provisional population totals, paper 2, Volume 2 of 2011 Rural- Urban Distribution Assam Series 19

8. Ghosh, Sumita (1998): Introduction to Settlement Geography -Orient Longman Limited –17 Chittaranjan Avenue Calcutta.

9. Harris, C.D and Ullman, E.L. (1945): The Nature of Cities. Annals, American Academy of Political and Social Science.

10. Jha, V.N. (2006): Small Towns and Regional Development, Rajesh Publications, New Deldhi-110002 p152

11. Knowles, R & Wareing, J (1976): Economic and Social Geography, Rupa & Co,

12. Ramachandran, R. (1999): Urbanization and Urban Systems in India, OUP, New Delhi.

13. Sankar, U. (2001): Population Pattern and Urban Development –Rajesh publications-New Delhi-12 Stamford p72

14. Siddhartha, K. and Mukherjee, S. (2006): Cities, Urbanizations and Urban Systems, Kisalaya Publications, Delhi

15. Singh, B. (2007): Urban Geography with Special Reference to Patiala, Rajesh Publications, New Delhi.110002.pp 85,98

16. Verma, L.N. (2006): Urban Geography, Rawat publication, Jaipur.

PERCEPTION OF LABOURERS' OF THE TEA ESTATES TOWARDS THE IMPLEMENTATION OF WELFARE FACILITIES UNDER THE FACTORIES ACT, 1948

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ABSTRACT

The paper draws a conclusion on the perception of labourers' of the Tea Estates of Barak Valley towards the level of implementation of welfare facilities under the Factories Act, 1948. Hypothesis is used to test whether the perception among the labouerers' differ. Reliability test is done to test the reliability of the data and further mean and standard deviation is used to know the extent in which the labourers' are satisfied. The test concludes unto moderate level of implementation of factories act, 1948 and every labour has their own perception towards the facilities received.

Keywords: Labours, Welfare, Perception, Factories Act, 1948

1. INTRODUCTION

"Welfare is the highest possible access to economic resources, a high level of well-being, including happiness, of the citizens, a guaranteed minimum income to avoid living in poverty, and, finally, having the capabilities to ensure the individual a good life" (Greve, 2008).

A study conducted reveals that welfare facilities are of help to the workers. It has helped them to develop the habit of savings, reduces absenteeism, increases efficiency among the workers, motivates the workers, good training improves their skill and knowledge, loan and compensation facilities makes them feel secure at workplace(Yadav & Kumar, 2013). Welfare measures provide job satisfaction to the labourers' (Gopal, 1995).

The study reveals a correlation between the welfare facilities and attitude of work of the labourers'. They being satisfied and feels it's beneficial for them. They are free to talk to senior regarding their problems,as necessary steps are taken immediately (Thangamani, Kalaiarasi, Ragu, & Sathya, 2016).

In 1881 the primary factory Act used to be followed and subsequently amendments were made, several instances in 1891, 1911, 1922 and 1948 incorporating various measures together with discounts of day-to-day hours of works providing defense wellness and welfare of staff. The offerings of women and kids have been restrained m hazardous and night shifts. The Act applies to all organizations using 10 or extra employees in the whole country. The Act presents welfare movements like cleanliness lights air flow passage sanitation disposal of water and effluents removing of dust and fumes provision of spittoons control of temperature crèche services ingesting water washing services first support appliances canteens leisure shelters and transferring preparations for staff. Depart with wages has been granted to the extent of 12 weeks to ladies staff on maternity grounds leave under the amendment Act of 1954 (Ministry of Labour and Employment).

2. IMPACT OF DEMOGRAPHIC VARIABLES ON LABOURERS' PERCEPTION

Demographic variable impacts the perceived risk. People with different age, gender, and social class have different perceptions (Mitchell & Boustani, 2014). Monetary benefit is not the source of happiness, non monetary benefit such as improved health conditions, non financial goals contributes to the happiness of a person, income does not explain the perception of welfare to great extent (Easterlin, 1974).

3. STATEMENT OF THE PROBLEM

Labours play a very important role in the tea industries, thus their well being must be taken care off, as it being a labour oriented industries. Greed to employers results in suffering of the labour. There are many welfare schemes but implementation of these schemes matters.

Tea industries of Assam have been neglecting the human aspect of the organization. People associated to the business organization shares a monopoly power that should be taken care of(Goowalla, Labour Relations Practices in Tea Industry of Assam-With Special Reference to Jorhat District of Assam, 2012).The working condition being poor affects the labourers in a negative way and thus the production(Majumder & Roy, 2012).Tea community is highly deprived in all respects of socio economic and political aspects, which is affecting the growth of the society(Sarma, 2003). Dearth of finance in the tea estates prohibits the extension and replacement planting (Mondal, 1981).The progress of the industries is correlated to the satisfaction of the labour force; in this context the labour welfare is given importance (Atish, 2014).

4. REVIEW OF LITERATURE

Employees are highly delicate which need constant welfare measures for their progress and performance in the field (Rajkuar, 2014).

There is strong correlation between labour welfare and job satisfaction (Souza, 2009).

A Study concluded welfare, health, safety as means encouraging the efficiency of labour leading to higher production, making them satisfied(Logasakthi & Rajagopal, 2013), (Mohan & Panwar, 2013), (Salaria & Salaria, 2013),(Srinivas, 2013).

A study proves that the factories act implementation was not much effective, wherein trade union doesnot have much say in its implementation and degree of implementation is different in central, state and private establishments (Sheoran, 2013).

Industry and human resources are directly related as a result their health and safety provisions under the Factories Act, 1948 must be of utmost importance for the employer. A study reveals that few labours are not happy as things are not followed properly as mentioned in the provision of health and safety under the factories act whereas maximum of them are happy as for them they receive the same benefit and facilities as mentioned. This provision safeguards the life of the labours(Singh M. , 2014).

Factories Act, 1948 has proposed provisions for the safety of the labours. But labours must be made aware of how to react to uncertain situation. Accident Prevention Programme (APP) is circulated among companies which helps labour to be educated about their reaction and behavior in uncertain situation(Das, 2013).

Poverty in the factor leading a child to work instead of studying. A study reveals that vocational training in the special schools for labours are weak, they do not have sufficient material for learning and teaching and furniture, its seen children's after attending special schools they do not join formal school instead they join their family to earn to support the family(Pradhan, Mishra, & Anuradha, 2006)

Legislation related to health at work is not enough. Physicians present at a particular work place must take care and suggest the needs and requirements for the betterment of health in that particular work place. This legislation must be reviewed and updated (Kulkarni, 2008).

The review of legislation in the Factories Act, 1948 in 2017 was opposed by the trade unions when their was a change in the definition of factory where the state government was given right for the increment on the limit of workers (The Hindu, 2017)

A study views that the management was following the statutory provisions mentioned in the Factories Act 1948; the welfare benefits thus provided were helpful generating a sense on motivation among the employees(Prabakar, 2013).

5. OBJECTIVE

The main objective of this chapter is to analyze labourers' perception on the adoption of the Factories Act, 1948 in Tea Estates of Barak Valley.

6. HYPOTHESIS

The following hypothesis is tested in this chapter

- There is no significant difference in perception among the labourers' in connection with the Factories Act, 1948 adopted in the tea estates.

7. RESEARCH QUESTION

The answer to following research question is sought in this chapter.

- What is the labourers' perception on the welfare scheme the Factories Act, 1948 adopted in Tea Estates of Barak Valley?

8. RESEARCH METHODOLOGY

According to Redman and Mory research is a "systematized effort to gain a new knowledge". "Research methodology is a way to systematically solve the research problem" (Kothari, 2004).

a. **Nature of the study:** The present study is **empirical** in nature considering the tea estates of Barak Valley.

b. **Sources of Data-** The study relies both on primary and secondary sources of information. Secondary data would be collected from various journals, articles, magazines, newspapers, newsletters, periodicals, reports, websites, etc. The primary data will be collected from the labourers to be considered in the sample with the help of structured questionnaire.

c. **Identification of research population-** The study considers 13773 labourers of 9 tea estates considering 3 each from Cachar, Karimganj and Hailakandi districts of Barak Valley as study area.

Table-1: The population of the study

Districts	Name of tea estate having production more than 10 lakh kilograms (in 2013)	Production in 2013 (kg)	Total Workers
Cachar	Dewan	1913865	1833
	Burtoll	1767875	1590
	Koomber	1655865	1213
Hailakandi	Aenakhall	1617156	1197
	Dholai	1454298	1143
	Lallamokh	1180398	690
Karimganj	DullabCherra	1614113	2489
	SephiljuriBheel	1586349	1568
	Hattikhera	1084827	2050
TOTAL			**13773**

Source: Personally collected from the Tea Board of India

d. **Population of the study-** For the purpose of the study total 13773 labourers from 9 tea estates (3 tea estates from 3 districts of Barak Valley) are considered as the population of the study.

e. **Determining the sample size-** At 95% confidence level and 5% confidence interval, if the population size is 13773, then the sample size would be 374. This sample size has been determined using the sample size calculator.

Table-2: Determining sample size

At Confidence Level	95%
At Confidence Interval	5%
Population Size	13773
Sample Size	374

Source: calculated using the sample size calculator (http://www.calculator.net/sample-size-calculator.html)

f. **Sampling process-** Multi-stage sampling method has been adopted in the study.Selection of tea estates constitutes the first stage; selection of labourers in the second stage. Selection of the tea estates has been done on the basis of production of tea (more than 10 lakh kilograms for the year 2013). Out of 58 tea estates in 3 districts of Barak Valley, only 16 tea estates produced more than 10 lakh kilograms of tea for the year 2013 in which Cachar district having 10, Hailakandi having 3 and karimganj having 3. Now to make uniformity from each district 3 tea estates are considered. From Cachar district, out of 10 tea estates best 3 would be considered (based on the production).

g. **Selection of ultimate sample units (i.e., stage two)-** After determining the sample size using the sample size calculator, the selection of labourers is done on the basis of Simple Random Sampling (SRS). As the sample size is 374 and there are 9 tea estates to be considered, so from each tea estate, minimum 41 and maximum 42 (as 374/9=41.56) labourers are interviewed with the help of the structured questionnaire. Further, 9 managers of those tea estates (1 from each tea estate) are also interviewed with the help of the structured questionnaire. So, in the present study managers of select 9 tea estates and 374 labourers of those tea estates is considered as samples. The Simple Random Sampling method is adopted for data collection form the labourers.

h. **Development of primary data collection tool (questionnaire)-** A set of questionnaire is developed with the view to collect primary data, which is administered the perception of the labourers of those tea estates regarding the actual implementation of the welfare schemes.

i. **Pilot survey-** After conducting the pilot survey among the labourers the questionnaire is finalized. Suitable Reliability tested is performed.

j. **Data analysis techniques-**Collected data would be analyzed with the help of suitable techniques particularly using basic statistical techniques and descriptive statistic. For testing the hypotheses, mean and standard deviation is performed according to the requirement of the study.

9. ANALYSIS AND FINDINGS

9.1 Measuring the Perception of labourers' towards the level of implementation of welfare facilities under the Factories Act, 1948

A. Reliability of the tool

Table-3: Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.918	.919	12

Source: Compiled from questionnaire

The reliability of the scale is performed and coefficient of Cronbach's Alpha was found to be 0.918 for 12 items under the Factories Act, 1948 considered for the study. The items considered fall under the Factories Act, 1948 like washing from section 42, storing and drying from section 43, first aid box from section 45, extra wages from section 59, canteen from section 46, crèches from section 48, timing for women from section 66, working hour from section 54, interval while working from section 55, shelter, restroom and lunch room from section 47. A very high value of Cronbach's Alpha (0.918) is indicative of very high degree of reliability of scale and it also shows that the items are highly correlated. Cronbach's Alpha of more than 0.70 is considered to be good measure of reliability of scale (Nunnaly, 1978). A high value of Cronbach's Alpha also indicates that the items considered for measuring the latent variable are actually measuring the latent variable.

B. Mean and Standard Deviation
The two basic statistics (i.e. mean and standard deviation) for measuring the perception of labourers' towards the level of implementation of welfare facilities under the Factories Act, 1948 for the study are presented in table 4.

Table-4: Item Statistics

Item Statistics		
Particulars	Mean	Std. Deviation
Washing	2.2857	0.93721
Storing and Drying	2.2963	0.80584
First aid box	2.3968	0.50587
Extra wages	2.6481	0.7103
Canteen	2.7222	0.66323
Crèches	2.8466	0.88773
Timing for women	3	0.83364
Working hour	3.0979	0.56741
Interval while working	3.1111	0.59022
Shelter	3.1323	1.02926
Rest room	3.1455	1.03902
Lunch room	3.1481	1.05512

Source: Compiled from questionnaire

There are various facilities available for the labourer's under the Factories Act 1948. Out of the various facilities washing, storing and drying and first aid box is considered to be implemented relatively more as perceived by the labourers' and facilities like lunchroom, restroom and shelter is considered to be implemented relatively less as perceived by the labourers'.

C. Scale statistics

Table-5: Scale Statistics

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
33.8307	51.451	7.17296	12

Source: Compiled from questionnaire

There are total 12 numbers of items and each item is noted down based on the responses from the respondents using Likert scale. The responses were from very high to not at all. For the response of very high, a score of 1 was assigned. Similarly for the response of high, moderate, low and not at all a score 2, 3, 4 and 5 were assigned respectively. Thus, for a scale consisting of 12 items the maximum possible score is 60 (12x5) and minimum possible score is 12 (12x1). The range is 48 [60(max)-12(min)]. Now if, 48 is divided by 5, 9.6 is obtained. This

9.6 is added to 12 (lowest possible score), then the range of 12 – 21.6 is obtained. Similarly, other intervals are obtained and several layers of perception are obtained which is given in table 4.1.4, its interpretation is also given as follows:

Table-6: Interpretation table

Interpretation table	
12 - 21.6	Very High
21.6 - 31.6	High
31.6 - 40.8	Moderate
40.8 - 50.4	Low
50.4- 60	Not at all

Source: Compiled from questionnaire

By looking at the scale statistics the mean score is 33.83, the mean score falls under the moderate level of perception towards the level of implementation of welfare facilities under the Factories Act, 1948.

Thus, it can be inferred that there is moderate level of implementation as perceived by the labourers' towards the welfare schemes and facilities available for them under the Factories Act, 1948.

9.2 Impact of Demographic Variables on Labours Perception towards implementation of welfare provisions of Factories Act, 1948

Table-7: Gender and Labourers' perception towards implementation of welfare facilities under the Factories Act, 1948

			GENDER		Total
			MALE	FEMALE	
Level of implementation of welfare facilities under the Factories Act, 1948	VERY HIGH	Count	0	42	42
		% of Total	0.0%	11.1%	11.1%
	HIGH	Count	65	36	101
		% of Total	17.2%	9.5%	26.7%
	MODERATE	Count	57	60	117
		% of Total	15.1%	15.9%	31.0%
	LOW	Count	80	38	118
		% of Total	21.2%	10.1%	31.2%
Total		Count	202	176	378
		% of Total	53.4%	46.6%	100.0%

Source: Compiled from questionnaire

There are 11.1% of females saying towards very high level of implementation of the welfare facilities under the Factories Act, 1948 whereas 21.1% of males saying towards low level of implementation of welfare facilities under the Factories act, 1948. The association between gender and level of implementation of welfare facilities under Factories Act, 1948 is tested using Cramer's V test and it is found that the association between these two variables is significant since the p-value of Cramer's V test is 0.000 which is less than 0.05 (5% level of significance).

Therefore, it can be inferred that gender has an influence on the perception of labourers' towards implementation of welfare facilities under the Factories Act, 1948 and since the p-value is less than 0.05, it can be concluded that the above findings are also traceable in the population.

Table-8: Age and Labourers' perception towards implementation of welfare facilities under the Factories Act, 1948

			AGE				Total
			14-25	26-35	36-45	46 AND ABOVE	
Level of implementation of welfare facilities under the Factories Act, 1948	VERY HIGH	Count	0	0	26	16	42
		% of Total	0.0%	0.0%	6.9%	4.2%	11.1%
	HIGH	Count	1	39	45	16	101
		% of Total	0.3%	10.3%	11.9%	4.2%	26.7%
	MODERATE	Count	1	30	59	27	117
		% of Total	0.3%	7.9%	15.6%	7.1%	31.0%

LOW	Count	6	41	59	12	118	
	% of Total	1.6%	10.8%	15.6%	3.2%	31.2%	
Total	Count	8	110	189	71	378	
	% of Total	2.1%	29.1%	50.0%	18.8%	100.0%	

Source: Compiled from questionnaire

There are 6.9% of labourers' of age between 36-45 years saying towards very high level of implementation of the welfare facilities under the Factories Act, 1948 whereas 15.6% of labourers' of age between 36-45 years saying towards low level of implementation of welfare facilities under the Factories Act, 1948. The association between age and level of implementation of welfare facilities under the Factories Act, 1948 is tested using Cramer's V test and it is found that the association between these two variables is significant since the p-value of Cramer's V test is 0.000 which is less than 0.05 (5% level of significance).

Therefore, it can be inferred that age has an influence on the perception of labourers' towards implementation of welfare facilities under the Factories Act, 1948 and since the p-value is less than 0.05, it can be concluded that the above findings are also traceable in the population.

Table-9: Income and Labourers' perception towards implementation of welfare facilities under the Factories Act, 1948

			INCOME			Total
			1001-5000	**5001-10000**	**10001 AND ABOVE**	
Level of implementation of welfare facilities under the Factories Act, 1948	VERY HIGH	Count	42	0	0	42
		% of Total	11.1%	0.0%	0.0%	11.1%
	HIGH	Count	94	3	4	101
		% of Total	24.9%	0.8%	1.1%	26.7%
	MODERATE	Count	111	5	1	117
		% of Total	29.4%	1.3%	0.3%	31.0%
	LOW	Count	113	4	1	118
		% of Total	29.9%	1.1%	0.3%	31.2%
Total		Count	360	12	6	378
		% of Total	95.2%	3.2%	1.6%	100.0%

Source: Compiled from questionnaire

There are 11.1% of labourers' of income between INR 1001-5000 saying towards very high level of implementation of the welfare facilities under the Factories Act, 1948 whereas 29.9% of labourers' of income between INR 1001-5000 saying towards low level of implementation of welfare facilities under the Factories Act, 1948. The association between income and level of implementation of welfare facilities under the Factories Act, 1948 is tested using Cramer's V test and it is found that the association between these two variables is not significant since the p-value of Cramer's V test is 0.319 which is more than 0.05 (5% level of significance).

Therefore, it can be inferred that income has no influence on the perception of labourers' towards implementation of welfare facilities under the Factories Act, 1948.

Table-10: Experience and Labourers' perception towards implementation of welfare facilities under the Factories Act, 1948

			EXPERIENCE				Total
			LESS THAN 1 YEAR	**1-5 YEAR**	**6-10 YEAR**	**10 YEAR AND ABOVE**	
Level of implementation of welfare facilities under the Factories Act, 1948	VERY HIGH	Count	0	0	0	42	42
		% of Total	0.0%	0.0%	0.0%	11.1%	11.1%
	HIGH	Count	0	47	21	33	101
		% of Total	0.0%	12.4%	5.6%	8.7%	26.7%
	MODERATE	Count	1	4	56	56	117
		% of Total	0.3%	1.1%	14.8%	14.8%	31.0%
	LOW	Count	0	2	43	73	118
		% of Total	0.0%	0.5%	11.4%	19.3%	31.2%
Total		Count	1	53	120	204	378
		% of Total	0.3%	14.0%	31.7%	54.0%	100.0%

Source: Compiled from questionnaire

There are 11.1% of labourers' having experience of 10 years and above saying towards very high level of implementation of the welfare facilities under the Factories Act, 1948 whereas 19.3% of labourers' having experience of 10 years and above saying towards low level of implementation of welfare facilities under the Factories Act, 1948. The association between experience and level of implementation of welfare facilities under the Factories Act, 1948 is tested using Cramer's V test and it is found that the association between these two variables is significant since the p-value of Cramer's V test is 0.000 which is less than 0.05 (5% level of significance).

Therefore, it can be inferred that experience has an influence on the perception of labourers' towards implementation of welfare facilities under the Factories Act, 1948 and since the p-value is less than 0.05, it can be concluded that the above findings are also traceable in the population.

Table-11: District and Labourers' perception towards implementation of welfare facilities under the Factories Act, 1948

			DISTRICT			Total
			KARIM GANJ	HAILA KANDI	CACHAR	
Level of implementation of welfare facilities under the Factories Act, 1948	VERY HIGH	Count	0	0	42	42
		% of Total	0.0%	0.0%	11.1%	11.1%
	HIGH	Count	45	39	17	101
		% of Total	11.9%	10.3%	4.5%	26.7%
	MODERATE	Count	44	7	66	117
		% of Total	11.6%	1.9%	17.5%	31.0%
	LOW	Count	37	80	1	118
		% of Total	9.8%	21.2%	0.3%	31.2%
Total		Count	126	126	126	378
		% of Total	33.3%	33.3%	33.3%	100.0%

Source: Compiled from questionnaire

There are 11.1% of labourers' of district Cachar saying towards very high level of implementation of the welfare facilities under the Factories Act, 1948 whereas 21.2% of labourers' of district Hailakandi saying towards low level of implementation of welfare facilities under the Factories Act, 1948. The association between district and level of implementation of welfare facilities under Factory Act, 1948 is tested using Cramer's V test and it is found that the association between these two variables is significant since the p-value of Cramer's V test is 0.000 which is less than 0.05 (5% level of significance).

Therefore, it can be inferred that district has an influence on the perception of labourers' towards implementation of welfare facilities under the Factories Act, 1948 and since the p-value is less than 0.05, it can be concluded that the above findings are also traceable in the population.

Table-12: Tea Estate and Labourers' perception towards implementation of welfare facilities under the Factories Act, 1948

			TEA ESTATE									Total
			SEPHINJU RI BHEEL	DULLAB CHERA	HATHI KHIRA	AENAK HAL	DHOL AI	LALAM UKH	BURTO LL	KOOMB ER	DEWA N	
Level of implementation of welfare facilities under the Factories Act, 1948	VERY HIGH	Count	0	0	0	0	0	0	0	42	0	42
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	0.0%	11.1%
	HIGH	Count	3	42	0	39	0	0	17	0	0	101
		% of Total	0.8%	11.1%	0.0%	10.3%	0.0%	0.0%	4.5%	0.0%	0.0%	26.7%
	MODERATE	Count	38	0	6	3	2	2	24	0	42	117
		% of Total	10.1%	0.0%	1.6%	0.8%	0.5%	0.5%	6.3%	0.0%	11.1%	31.0%
	LOW	Count	1	0	36	0	40	40	1	0	0	118
		% of Total	0.3%	0.0%	9.5%	0.0%	10.6%	10.6%	0.3%	0.0%	0.0%	31.2%
Total		Count	42	42	42	42	42	42	42	42	42	378
		% of Total	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	100.0%

Source: Compiled from questionnaire

There are 11.1% of labourers' of Koomber Tea Estate saying towards very high level of implementation of the welfare facilities under the Factories Act, 1948 whereas 10.6% of labourers' of both from Dholai and Lalamukh Tea Estate saying towards low level of implementation of welfare facilities under the Factories Act, 1948. The association between Tea Estate and level of implementation of welfare facilities under Factory Act, 1948 is tested using Cramer's V test and it is found that the association between these two variables is significant since the p-value of Cramer's V test is 0.000 which is less than 0.05 (5% level of significance).

Therefore, it can be inferred that Tea Estate has an influence on the perception of labourers' towards implementation of welfare facilities under the Factories Act, 1948 and since the p-value is less than 0.05, it can be concluded that the above findings are also traceable in the population.

10. CONCLUSION

Factories act, 1948, has moderate level of implementation towards the welfare schemes and facilities as perceived by the labour. Under the Factories Act, 1948, it's seen that demographic variables like gender, age, experience, district, tea estates has an influence on the perception of labourers' towards implementation of welfare facilities. Whereas, income has no influence on the perception of labourers' towards implementation of the act.

A study conducted to see demographic variable like age and genders affect on ethical conduct proves that females are in better situation and when it comes to age it proves that older the people more ethical they were (Ruegger & King, 1992).

When it come to tea estates it's not the technology or money but it's the human aspects that takes an edge and thus will help to survive in this competitive world (Goowalla, 2012).

When the work is assigned sexual discrimination is usually done some jobs are particularly for men and some for women (Bielby & Baron, 1986).

A study has shown that improper supply of household food causing insufficiency has affected the mental health of welfare recipients, who are the women earning low income (Heflin, Siefert, & Williams, 2005).

The tea industry is usually said of not implementing these provisions are because of crisis though India had maximum tea production in 2015-16 (Rakshit, 2016).

Labour welfare is an extension to the word welfare, which mainly aims at the well being of the labours. These welfare acts as an additional component in industrialization that provides a sense of relief and contentment to the labours. Welfare may be in terms of monetary or non-monetary. This component is very important as it increases efficiency of labours giving a rise in production. Welfare enhances the performance of labours that in turn improves their competitiveness in global market. Labours are hired, trained and compensated, but their retention in an organization depends mainly upon how well they are treated in an organization, i.e., their well-being. The government comes up with come statutory legislation from time to time to bring about uniformity in the basic amenities available to labours. Ignorance among the labours leads to exploitation on the part of employer. The welfare approach is necessary as industrialization influenced humans causing social and psychological distress (Ganapathy, 2014).

If labourers' are taken care of properly in return they will be take care of the organization, it's a give and take policy. Thus, the welfare schemes are for the betterment of the labourers' and needs to be implemented without a thought for a better society.

REFERENCES

- Nunnaly, J. (1978). *Psychometric Theory.* New York: McGrow hill.

- Ruegger, D., & King, E. w. (1992). A study of the effect of age and gender upon student business ethics. *Journal of Business Ethics, 11* (3), 179-186.

- Keitany, B. J. (2014). *Perceived Relationship Between Emloyee Welfare Programs and Employee Performance at Kenya Pipeline Company.* Retrieved September 10th, 2017, from erepository.uonbi.ac.ke: erepository.uonbi.ac.ke/bitstream/handle/11295/76770/Keitany_Perceived%Relationship%20Between%20E mployee%20Welfare%20Program%20and%20Employee%20performance%20at%20Kenya%20Pipeline%2 0Company.pdf?sequence=3

- Goowalla, D. H. (2012). Labour Relation Practices in Tea Industry of Assam- With Special Reference to Jorhat District of Assam. *IOSR Journal of Humanities and Social Science, 1* (2), 35-41.

- Bielby, W. T., & Baron, J. N. (1986, Jan). *American Journal of Sociology, Vol.91, Number 4.* Retrieved September 11th, 2017, from The University Of Chicago Press Journals: www.journals.uchicago.edu/doi/pdfplus/10.1086/228350

- Heflin, C. M., Siefert, K., & Williams, D. R. (2005). Food Insufficiency and women's metal health: Findings from a 3-year panel of welfare recipients. *Social Science & Medicine, 61* (9), 1971-1982.

- Harteis, C., Billett, S., Goller, M., Rausch, A., & Seifried, J. (2015). Effects of age, gender and occupation on perceived workplace learning support. *International Journal of Training Research, 13* (1).

- Singh, V., & Aggarwal, S. (2014). Employees awareness towards the Welfare provisions of Factories Act 1948 and its Implementation in the state of Haryana. *interntional Journal of Commerce, Business and Management, ISSN: 2319-2828, 3* (2).

- Rakshit, A. (2016, June 17). *India record highest-ever tea production in 2015-16*. Retrieved September 11, 2017, from business standard: www.business-standard.com/article/markets/india-records-highest-ever-tea-production-in-2015-16-116061700687_1.html

- Koodam, T. (2016, August 1). *Chaay Garam-Documentary on living and working conditions of tea plantation workers*. Retrieved September 11, 2017, from A blog on labour issues in Tamil Nadu: tnlabour.in/featured/3938

- Greve, B. (2008). What is Welfare? *Central European Journal of Public Policy, Vol. 2, No.1, July* , 58-65.

- Yadav, M., & Kumar, A. (2013). A Study of Labour Welfare Measures in the Corporate Sector. *Asian-African Journal of Economics and Econometrics, Vol. 13, No. 2, 2013: 329-337* , 335-337.

- Gopal, P. (1995). *Labour Welfare and Job Satisfaction* . New Delhi: Deep and Deep Publications.

- Thangamani, V., Kalaiarasi, V., Ragu, R., & Sathya, S. (2016). A Study on Employee Welfare Measures in Garment Industry with Reference to Tirurpur. *International Journal for Scientific Research & Development, Vol. 4, Issue 02, ISSN: 2321-0613* , 669-670.

- Mitchell, V., & Boustani, P. (2014 йил 6-December). *The Effects of Demographic Variables on Measuring Perceived Risk* . Retrieved 2016 йил 18-December from Springer Link: http://link.springer.com/chapter/10.1007/978-3-319-13159-7_143

- Easterlin, R. A. (1974). *The Economics of Happiness.* Retrieved 2016 йил 18-December from http://www-bcf.usc.edu/~easterl/papers/Happiness.pdf

- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques* (Vol. 2nd). Delhi, Delhi, India: New Age International (P) Ltd.

- *Ministry of Labour and Employment*. (n.d.). Retrieved March 23, 2018, from Factories Act, 1948: www.labour.nic.in/sites/default/files/TheFactoriesAct1948.pdf

- Ganapathy, R. (2014). *Employee Welfare Final Project Report r.* Retrieved 2014 йил 9-December from www.scribed.com: https://www.scribd.com/doc/57755444/35/Definition-of-Employee-Welfare

PAKISTAN'S NUCLEAR PROGRAMME: CHALLENGES FOR INDIA

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Nuclear weapons today are a part of Pakistan's belief system, having been built up over the years because they seem to have provided a credible deterrent against Indian aggression. Pakistan is convinced, maybe rightly so, that its nuclear capability has been able to deter India from escalating hostilities in the last three decades. Pakistan is now on a journey to strengthen its deterrent.

Pakistan today has the world's fastest growing nuclear stockpile, according to a report published in 2015. Given the rate of its plutonium and highly enriched uranium (HEU) production, it may be able to produce another 200 nuclear warheads in next five to 10 years, taking its arsenal to close to 350 warheads.[1] The production of such a staggering stockpile has been an extremely worrisome trend: a majority of nuclear warheads produced by Pakistan in the last decade are thought to be low-yield tactical weapons. The rapid tacticalization of a strategic asset in a region considered to be a nuclear flashpoint has raised plethora of security and strategic questions.[2]

Pakistan is at the epicenter of global jihadi terrorism. The country has faced some devastating attacks on its defense apparatus by jihadists in the past decade or so; there have been repeated instances, for example, where some of these attacks were mounted with the help of insiders within the Pakistani military establishment. This internal chaos, coupled with perpetual tensions with its eastern neighbor, India, makes Pakistan a bit of nuclear nightmare. Its willingness to use tactical nuclear weapons even against a limited conventional incursion by India further complicates this situation.

Pakistan's nuclear program was an issue that President Jimmy Carter took up when he became president in early 1977. In fact, Pakistan's successful pursuit of a nuclear arsenal was "the most significant frustration for the Carter administration's nonproliferation policy" (National Security Archive 2010). Curiously, despite Bhutto's proclamation in 1965 that it would eat grass if needed to acquire a nuclear weapon, U.S. intelligence did not seriously consider the possibility that Pakistan would seek this capability until India tested in 1974 (NIE 4-1-74, 1974). Many of the ways in which the United States sought to thwart Pakistani efforts resemble contemporary ways of managing Pakistan. In April 1977, Carter's team understood Bhutto's increasingly fraught political situation but nonetheless assessed that they had a "good chance of persuading Bhutto to forego his nuclear purchase if [they could] offer him trade-offs which he can present domestically as responsive to Pakistan's legitimate military, economic and energy needs"[3] Warren Christopher—reprising what Henry Kissinger offered Pakistan when he was Secretary of State—proposed offering Bhutto sales of advanced weapons systems, including F-5E fighters and possibly A4s, coupled with economic assistance, guaranteed fuel supply for Pakistan's nuclear reactors, as well as financing of a French nuclear reactor. Carter's team never had the chance to make the offer to Bhutto as he was deposed on July 5. After the French deal fell through under considerable U.S. pressure, the CIA assessed that the "available data points to a judgment that even a very crude Pakistani nuclear device is probably many years away. A mix of shortcomings in scientific know how, likely difficulty in acquiring or developing critical reprocessing facilities capable of producing usable plutonium, domestic financial problems,…all increase the odds against Pakistan going nuclear—perhaps for the next decade or even longer" (U.S. Central Intelligence Agency 1978a, 6-7). By August 1978, the Americans were even exploring ways to restore economic aid to Pakistan that had been suspended since September of the previous year (U.S. Department of State 1978a). The U.S. Undersecretary of State for Political Affairs, David Newsom, was considering various concerns pertaining to the language and intent of the Glenn Amendment, triggered by the French transfer of reprocessing technology. The cancellation of the French deal dispensed with the transfer of technology issue, but it did not alleviate concerns about Pakistan's intention to develop such a capability indigenously. Newsome raised these issues with Yaqub Khan, Pakistan's ambassador to the United States, and discussed with him the desirability for a written statement that Pakistan would not pursue such an indigenous reprocessing technology. Khan balked and bluntly explained to Newsome that such a request was "not realistic because if Pakistan really wanted to go ahead with reprocessing it would not matter how many assurances

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[1] Shapoo, Sajid farid, 2017. "The danger of Pakistan's Nuclear tactical weapons" The diplomat February 01

[2] Ibid

[3] Christopher, Warren. 1977. "Memorandum for the President on Reprocessing Negotiations with Pakistan: A Negotiating Strategy," April 2

Pakistan provided" (U.S. DoS 1978a, 3). This critical issue, the United States still sought to "clear away an obstacle" and "find a formula to resume normal relations with Pakistan"(U.S. DoS 1978a, 3). Later, this issue again came up between the U.S. Ambassador to Pakistan, Arthur Hummel, and Pakistan's Minister of State for Foreign Affairs, Agha Shahi. Shahi similarly maintained that even private assurances were not possible (U.S. DoS 1978b). Zia further complicated the State Department's efforts to find a way to resume normal ties with Pakistan, which apparently meant provision of economic assistance, when he told a Saudi newspaper that "if Pakistan possesses such a weapon it would reinforce the power of the Muslim world" because no other Muslim country had such a weapon. Hummel believed that Zia, unlike Bhutto, genuinely sought better ties with the United States and thus wanted to avoid publicizing the "gaffe" to avoid "creating problems for [himself]" (National Security Archive 2010). However, the nonproliferation proponents in Congress were growing increasingly wary of Pakistan and were not enthusiastic about resuming aid to Pakistan unless Islamabad could lay to rest any suspicions about developing a reprocessing capability. Pakistan did little to assuage Congress' mounting and ever-more justifiable concerns. In August 1978, Undersecretary Newsom met with Shahi and explained to him that economic aid could not resume without some assurance from Islamabad. Shahi rebuffed him, noting as his compatriots had that it was a "impossible for the [Government of Pakistan] to provide public or private assurances" on Pakistan's intentions for reprocessing (U.S. DoS 1978c, 1). Moreover, he asserted that Pakistan "has the unfettered right to do what it wishes and will retain all its options" (U.S. DoS 1978c, 4).[4]

We now know that U.S. intelligence did not thoroughly understand the options that Pakistan had cultivated. Even as the afore-noted CIA study was being written, A.Q. Khan had already established his secret procurement Network and was making considerable headway in acquiring technology required to construct a centrifuge facility.

Moreover, neither the CIA nor the U.S. Department of State was aware of the preexisting extent of Chinese-Pakistani cooperation. In an August 1975, Hummel met with the Chinese ambassador to Pakistan, Lu Weizhao. He reported his satisfaction over the apparent credibility of Chinese assurances that it would not help Pakistan. Nuclear expert Robert Galluci responded to Hummel's assertion in his own cable, pointing out that Beijing did have the expertise to build a reprocessing plant, albeit less sophisticated than that of France, and that the Chinese could help the Pakistanis extract plutonium from the KANUPP plant (U.S. DoS 1978d).

As the regional situation deteriorated in Afghanistan and in Iran, the United States still wanted to find a way to provide military sales and increase development aid despite Pakistan's recalcitrance on the nuclear issue. By 1978, it became clear how little the United States knew about the progress Pakistan was making. Recall that the 1978 CIA report did not even consider that Pakistan would take the uranium enrichment route to bomb building (National Security Archive 2010). U.S. assessments also downplayed both A.Q. Khan's developing success and the Chinese commitment to help Pakistan. However, in December 1978, the CIA learned from European intelligence that Pakistan was constructing a uranium enrichment plant, a possibility the organization had not previously considered in its assessment from April of that year. A subsequent report assessed that "Pakistan's efforts to acquire foreign equipment for a uranium enrichment plan now under construction have been more extensive and sophisticated than previously indicated. Despite the best efforts of nuclear supplier states to thwart these activities, Pakistan may succeed in acquiring the main missing components for a strategically significant gas centrifuge enrichment capability".[5]

This revelation had implications for India's own nuclear program, as the report suggested that there were "signs of heightened concern" in India.[6] The early months of 1979 proffered more revelations about the progress of Pakistan's nuclear program, and "unspecified intelligence going back to 1977 on Pakistan's attempts to 'import critical components' had also surfaced" (National Security Archives 2010). Despite mounting evidence of Pakistan's intentions, the U.S. Department of State worried that futher adverse developments in Pakistan— including Zia's hanging of Bhutto—would promote further diplomatic damage and sought to "change the law to gain 'more flexibility and time'"(National Security Archives 2010). A cable dated January 1979 reveals curious information about the Indians' assessment of Pakistan's program. In that cable, an Indian official referred to as "Shankar" averred that Pakistan could weaponize within two to three months. The State Department sought to assure India that the United States was "watching the Pak situation very closely" and "that, even with a priority

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[4] Ibid.

[5] U.S. Central Intelligence Agency. 1978a. "Pakistan Nuclear Study," April 26. Available at http://nsarchive.gwu.edu/nukevault/ebb333/doc05.pdf.

[6] Ibid.

effort, it would take the Pak a number of years [three to five], and that we are taking steps to try to dissuade them from any efforts at acquiring such capabilities" (U.S. Dos 1979a, 2). In February 1979, the United States confronted Zia with photographic information about the facility at Kahuta, which Zia rubbished as "ridiculous." Ambassador Hummel warned Zia that the divergence between what the United States was learning about Pakistan's program and Pakistan's official statements increaed the likelihood that Symington Act sanctions, which prohibited most forms of U.S. assistance to any country that traffics in nuclear enrichment technology or equipment outside of international safeguards.[7] As Pakistan continued its progress toward acquiring a nuclear weapons capability, the United States considered an "audacious buy off" under which it would provide Pakistan a "security and stability package" that totaled $290 million (in FY 1980 dollars) in military and economic aid aimed at mitigating Pakistan's fears with respect and India and thus dampening Pakistan's quest for a nuclear weapon (National Security Archive 2010; U.S. DoS 1979c). American strategic thinking was further complicated by other developments unfolding concurrently. By March 1979, the United States was also concerned about events in Iran. In a memorandum to Secretary of State Christopher from Harold Saunders and Thomas Pickering, the authors argued that the United States was "urgently in need of a comprehensive strategy for Pakistan. We [face] two major issues: (1) an increasing requirement for stability and security in the South Asia region in which Pakistan is a key actor and (2) the need to deal with Pakistan's nuclear weapons program" (U.S. DoS 1979c, 2). They argued against prioritizing one of these issues over the other, fearing that "to deal alone and separately with the nuclear weapons problem is likely to push us into a punitive and restrictive policy towards Pakistan and thus ignore the major need to enhance ties with that state thorough security assistance and stability programs" (U.S. DoS 1979c, 2). They further argued that the key to Washington's success would be the "quality of the stability and security package." And in the event of a collapse in Iran, the provision of "modern conventional weapons in Pakistan, such as the F-16, should take priority over the proliferation of nuclear weapons there" (U.S. DoS 1979c, 3).

Despite the Department of State's efforts to persuade Pakistan through lucrative perquisites to abandon its nuclear push, by March 1979 the United States also learned that Pakistan had acquired critical technologies for its enrichment program. The Department of State assessed that Pakistan was rapidly building a "secret uranium enrichment plant which by 1983 will begin to yield sufficient quantities of fissile materials to support a nuclear weapons program".[8]

When confronted, Zia confirmed the status of the enrichment program, and the United States was left with no option but to apply Symington sanctions in April 1979. Initially, the Americans did not want this decision to be known publically; Washington did not even officially notify Islamabad that the United States had terminated aid programs or address the issue of their future continuation.[9] Meanwhile, the Indian and British media became aware of Pakistan's progress in reprocessing technology (U.S. DoS 1979f). One Department of State memo suggested that though Indian and British media were aware of the sanctions decision, State believed it was best to "continue to deal with this matter on a confidential basis for as long as possible" (U.S. DoS 1979h, 5). Documents from this period demonstrate Indian knowledge of Pakistan's progress. Secretary of State Cyrus Vance wrote to President Carter urging him to personally intervene to manage the diplomatic fallout over the imposition of sanctions. In this letter Vance explained to Carter that "India has detailed knowledge of the Pakistani enrichment program, and [Prime Minister Morarji] Desai has written Zia of his concern about Pakistani nuclear activities" (U.S. DoS 1979f, 5). American efforts to shield their policy decisions from the media were obviated by India's "persistent efforts to stimulate international public attention to Pakistan's weapons related programs" by writing editorials and news stories publicizing Pakistan's progress in centrifuge enrichment (U.S. DoS 1979g, 8). In October of 1979, the U.S. Embassy in New Delhi cabled to the Secretary of State to describe a private meeting between (presumably) the U.S. Ambassador and India's Prime Minister Desai. When asked what he planned to do about the danger posed by Pakistan, Desai responded "should the Pakitsanis develop an explosives capability….[or] if he discovered that Pakistan was ready to test a bomb or if it exploded one, he would act at [once] to 'smash it" (U.S. DoS 1979j, 2). By June of 1979, State reported rumours about a potential nuclear test in 1979 (U.S. DoS 1979k).

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[7] 1979b. " U.S. Embassy Islamabad to cable 2413 to State Department, "Pakistan Nuclear Program: Technical Team Visit," 27 February 1979. Available at http://nsarchive.gwu.edu/nukevault/ebb333/doc25.pdf

[8] U.S. document 1979f. "Ambassador Pickering, Paul Kreisberg, and Jack Miklos through Mr. Newsom and Mrs. Benson to the Secretary, "Presidential Letter to President Zia on Nuclear Issues," 21 March.

[9] U.S. Document1979e. "Herbert J. Hansell through Lucy Wilson Benson to Mr. Newsom, "Pakistan and the Symington Amendment," 17 March.

With the Soviet invasion of Afghanistan, Zbigniew Brzezinski—President Carter's national security advisor—told Carter that Washington needed Pakistan's support to oust the Red Army from Afghanistan. Doing so would "require...more guarantees to [Pakistan], more arms aid, and, alas, a decision that our security policy cannot be dictated by our nonproliferation policy".[10] The Carter administration suspended its proliferation concerns and proposed a $400 million aid package (divided equally between economic and military assistance) to Zia. Zia rebuffed the offer as mere "peanuts." Brigadier (Retd) Salik notes of this offer that Zia patiently waited for over a year after the Soviet military intervention in Afghanistan, and so was able to obtain a more substantive deal than the 'peanuts' offered by Carter. Zia and his advisors had correctly appreciated the outcome of the U.S. Presidential elections and were willing to bide their time to see off the last few months of the Carter presidency.[11]

In essence, the Pakistani and American governments tacitly agreed that "the Reagan administration could live with Pakistan's nuclear programme as long as Islamabad did not explode a bomb" (Salik 2009).This understanding became U.S. law when the U.S. Congress passed Reagan's assistance plan, which included a six-year waiver of the 1979 Symington Amendment sanctions and simultaneously banned economic and military assistance to any country that exploded a nuclear device.[12]

Despite the increasingly negative international attention, Pakistan remained a vital component of the Reagan White House's efforts to oust the Soviets from Afghanistan. To assuage concerns in Congress, the Reagan Administration fashioned a new compact with Zia, extracting from him an assurance that Pakistan would not develop a nuclear weapon as long as he was in power. Vice President George Bush explained to Zia that "'exploding a device, violating safeguards, or reprocessing plutonium would pose a Very difficult problem for the Reagan administration' and that the nuclear issue continued to be a very sensitive topic in the United States".[13] It appeared as if the "Americans knew about Pakistan's enrichment effort, and were prepared to live with it, if Pakistan did not detonate a nuclear explosive device".[14] Despite Zia's assurance, the media continued to report upon Pakistan's progress in developing a bomb, which prompted President Reagan, in September 1984, to exhort President Zia of serious consequences should Pakistan enrich beyond five percent (Kux 2001, 276). This was the first time that Washington offered a clear read line. Zia remained evasive (Salik 2009; Kux 2001).

While under sanctions from the United States throughout the 1990s, Pakistan continued to make progress in developing both nuclear weapons themselves and the aircraft and missile vehicles with which to deliver them. On May 11 and 13, 1998, India detonated several nuclear devices in the Pokhran desert. On May 28, Pakistan reciprocated with its own nuclear tests in Balochistan's Chagai hills. These tests rendered both India and Pakistan de facto, although not jure, nuclear weapons states.[15] Since 1998, Pakistan has worked to develop its command and control infrastructure (i.e. Strategic Plans Division) and its nuclear doctrine. Oddly, the much-anticipated nuclear arms race between India and Pakistan did not materialize. In fact, India has been so slow to develop its nuclear arsenal that Perkovich and Dalton caution India to close this emerging gap but assert that India lacks the political attention required to overcome the numerous bureaucratic problems that have undermined its much-discussed but yet to be implemented defense modernization. Instead, India has focused upon developing its conventional capabilities enabled by its sustained economic growth over the last 25 years.

As of November 2016, experts believe that Pakistan has a stockpile of 130–140 warheads and has plans to continue growing its arsenal with four plutonium production reactors and ever-expanding uranium enrichment facilities. Kristensen and Norris predict that Pakistan's arsenal may grow to 220-250 by 2025, which would

[10] Coll, Steve. 2004. Ghost Wars: The Secret History of the CIA, Afghanistan, and bin Laden, from the Soviet Invasion to September 10, 2001. New York: Penguin Press.

[11] Salik, Naeem (Brig. Retd). 2009. The Genesis of South Asia Nuclear Deterrence: Pakistan's Perspective. Karachi: Oxford University Press. P. 97

[12] Ibid.

[13] Salik, Naeem (Brig. Retd). 2009. The Genesis of South Asia Nuclear Deterrence: Pakistan's Perspective. Karachi: Oxford University Press. P. 106

[14] Ibid.

[15] Fair, C. Christine. 2005. "Learning to Think the Unthinkable: Lessons from India's Nuclear Test," C. Christine Fair. India Review, Vol. 4, No. 1: 23-58.

render Pakistan the world's fifth-largest nuclear weapons state. Pakistan is also developing several land-based mechanisms to deliver warheads, which will join nuclear-capable aircraft (modified F-16s and Mirage Vs) in Pakistan's existing weapons delivery vehicle cache. Pakistan's ballistic missile arsenal includes the longer-range, solid-fueled Shaheen-III, with an estimated range of 2,750 km and 1,000 kg payload. This missile can target all of mainland India as well as Indian controlled islands in the Bay of Bengal. This is in addition to the two-staged, solid fuel Shaheen-II, Ghaznavi (est. 2,000 km range, 1,000-1,100 kg payload); the solid-fueled Ghaznavi (est. 290 km range, 800 kg payload); and the liquid fueled Ghaur (est. 1,300 km range, 700 kg payload). Pakistan is also continuing its development of the Babur nuclear-capable cruise missile fired from a multi-launch vehicle with an estimated 700 km range and 300 kg payload. Pakistan tested its Ra'ad, an air-launched cruise missile purported to have a range of 350 km with a payload of 350 kg, in January 2016, and it may also seek to develop sea-launched versions of the Babur and Ra'ad.[16]

Pakistan's most worrisome recent behavior is its much-publicized pursuit of so-called theater ballistic nuclear weapon (or tactical nuclear weapon), ostensibly in response to India's putative Cold Start doctrine. In 2011, the country's Inter-Services Public Relations (ISPR) division announced that Pakistan had successfully developed and tested a "Short Range Surface to Surface Multi Tube Ballistic Missile Hatf IX (NASR)." According to the ISPR press release, the NASR will "add deterrence value to Pakistan's Strategic Weapons Development programme at shorter ranges. NASR, with a range of 60 km, carries nuclear warheads of appropriate yield with high accuracy, shoot and scoot attributes. This quick response system addresses the need to deter evolving threats" (ISPR 2011). Yet apart from the international community at large, and the United States in particular, fears that Pakistan's nuclear weapons, materials, or technology may fall into the hands of non-state actors. These fears may be overblown in some measure (Clary 2010). Since the 1998 tests and the revelations of A.Q. Khan's black market entrepreneurialism, Pakistan has undertaken important efforts to bolster its nuclear command, control, and security arrangements, which most of the well-rehearsed doomsday scenarios fail to consider. In 2000, President Musharraf promulgated the so-called National Command Authority along with the Strategic Plans Division (SPD), the NCA's secretariat, and the specialized strategic forces. The SPD's principle brief is protecting Pakistan's strategic assets both from internal and external threats. After all, if terrorists can infiltrate Pakistan's program, so could hostile state agencies (i.e. India, the United States, Israel). SPD has a three-tiered security perimeter for nuclear facilities; systems for The SPD's principle brief is protecting Pakistan's strategic assets both from internal and external threats. After all, if terrorists can infiltrate Pakistan's program, so could hostile state agencies (i.e. India, the United States, Israel). SPD has a three-tiered security perimeter for nuclear facilities; systems for investigating and monitoring personnel; developing and deploying physical counter-measures, and fielding counter-intelligence teams meant to identify potential threats.[17] While these developments are encouraging, one should remember that the United States Air Force lost track of half a dozen nuclear war heads for 36 hours in August 2007, despite decades of work on command, control, and security arrangements

Security of the nuclear weapons and their components is also exacerbated during periods of conflict with India when Pakistan (and probably India as well) is thought to assemble the warheads and mate them with their delivery systems. As the conflict intensifies, Pakistan may forward deploy these assembled and mated weapons, both for potential employment and to guarantee a retaliatory capacity. During these periods, apprehensions about theft or other unauthorized transfer of weapons or components are more plausible than when they are in garrison, as Clary notes. Equally discomfiting, when the assembled and mated nuclear weapons are forward deployed, the "two-man" rule may be insufficient to prevent accidental or unauthorized launch amidst the heightened strain of emergency.

Doctrinally, Pakistan deliberately cultivates ambiguity about the conditions under which it would use its nuclear weapons against India. It is this strategic instability that Pakistan cultivates that allows it to use its proxy actors in India and elsewhere with impunity (the socalled "instability-instabiilty paradox" (Kapur 2007; See also Fair 2014). Pakistan relies on nuclear weapons to restrain India, both by raising the costs of Indian action against Pakistan and by bringing in the United States and other actors to dampen and then roll-back the conflict once it commences. The United States and other international actors are motivated to intervene for two reasons. First, preventing an Indo-Pakistan conflict that could potentially escalate to a nuclear confrontation remains an

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[16] Mc Claughlin, Jonathan. 2016. "Pakistan Missile Update-February 2016," Wisconsin Project on Nuclear Arms Control.

[17] Clary, Christopher. 2010. Thinking about Pakistan's Nuclear Security in Peacetime, Crisis and War. IDSA Occasional Paper No. 12.

important U.S. objective. The resulting devastation would be unprecedented, and few countries other than the United States would be positioned to conduct the humanitarian disaster relief that would follow. Pakistan's proliferation of theater nuclear weapons will shorten the timelines of international intervention because these foreign actors will want to mobilize before Pakistan can begin assembling, mating, and forward deploying its nuclear weapons. Pakistan therefore uses these risks to catalyze foreign intervention before India can effectively mobilize to inflict conventional damage to Pakistan. In other words, this international action serves to shield Pakistan from the consequences of its egregious behavior.

After all, if Pakistan was not plagued with Islamist militants and if there were no nuclear weapons that could be stolen, the United States and others would be more willing to explore negative inducements to compel Pakistan to cease using terrorists as tools of foreign policy. Instead, the United States and other countries and institutions continue to support Pakistan through economic and security assistance, which in turn enables Pakistan to continue investing in the very assets (nuclear weapons and terrorists) that so discomfit the international community in the first place. Unless the international community were to remove itself from Pakistan's coercion mechanism, it is likely to continue engaging Pakistan in this way.[18]

As Pakistan's program has evolved, its nuclear arsenal has ceased to simply serve only as a means to counter India's conventional superiority and to undermine potential doctrinal evolution. Today and in the recent past, Pakistan explicitly uses and has used these weapons to catalyze international activity immediately after a Pakistan-sponsored terror attack, thereby shielding the nation from the consequences of its action. The conjoined specter of nuclear weapons and Islamist terrorists is also part of Pakistan's strategy to extort rent from the international community, which has been persuaded that the consequences of Pakistan's failures would be catastrophic.

The implications of this analyses strongly suggest that the long-warn U.S. approach to managing Pakistan through lucrative allurements has failed to retard Pakistan's behaviors even modestly since the United States elected to waive nuclear-related sanctions when President Reagan assumed the White House. During the 1980s, Pakistan continued developing its arsenal while working closely with the United States. More recently, despite high-levels of American investments in Pakistan since 9/11, Pakistan has pursued battle-field nuclear weapons. American financial and security assistance has underwritten these developments while providing the United States little meaningful leverage to influence Pakistani behavior. The evidence strongly suggests that the United States requires a new policy approach towards Pakistan's nuclear activities. Left to its own devices, Pakistan will continue to persist with a suite of dangerous policies that have long served its purposes.

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[18] Fair, C. Christine. 2005. "Learning to Think the Unthinkable: Lessons from India's Nuclear Test," C. Christine Fair. India Review, Vol. 4, No. 1: 23-58

ABOUT THE JOURNAL

International Journal of Research in Management & Social Science is a quarterly double blind reviewed research journal of Empyreal Institute of Higher Education, Guwahati, India. It seeks to provide a platform to research scholars, practicing managers, and academicians in business management, commerce and allied fields, to present their research findings and share their views and experiences. Its aim is to promote research education worldwide and to establish acquaintances between management and Information Technology. The journal focuses on issues related to the development and implementation of new methodologies and technologies, which improve the operational objectives of an organization. These include, Project management, logistics, production management, e-commerce, quality management, financial planning, risk management, General Management, Banking, Insurance, International Business, Health Care Administration, Human Resource Management , Non-Profit Organizations, Operations Research/Statistics, Operations Management, Organizational Behavior and Theory, Organizational Development, Organizational Management, Production/Operations, Public Administration, Purchasing/Materials Management, Entrepreneurship, Strategic Management Policy, Technology/Innovation, Tourism and Hospitality, Supply Chain Management, Rural Management, Public Management, Knowledge Management, Business Ethics, Corporate Social Responsibility , Negotiations and Competitive Decision Making, Data Analysis, Hotel Management and emerging trends in allied subjects. The journal provides a forum for researchers and practitioners for the publication of innovative scholarly research, which contributes to the adoption of a new holistic managerial approach that ensures a technologically, economically, socially and ecologically acceptable deployment of new technologies in today's business practices.

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All references must be arranged first alphabetically and then it may be further sorted chronologically also.

- Abrams, F. W., (1951), 'Managements Responsibilities in a Complex World', Harvard Business Review, 29(3): 29 – 34.

- Bateson, C. D.,(2006), 'Doing Business after the Fall: The Virtue of Moral Hypocrisy', Journal of Business Ethics, 66: 321 – 335

- French, P. A. (1984), "Collective and Corporate Responsibility", Colombia University Press, New York.

- Morris, C. (1999) *Quantitative Approaches to Business Studies* (5th edn), London, Financial Times Pitman Publishing.

- Khushalani, Lakhan and Kulkarni, Prasad (2007), "Network Security", Presented at the National Conference on Emerging Technologies in Control and Instrumentation, October 19-20 2007, Mumbai: TSEC, 53 – 55.

- Dees, J.G. (2001), "The Meaning of Social Entrepreneurship", Retrieved from: http://www.caseatduke.org/documents/dees_sedef.pdf (accessed 10th December 2010).

- K. Mae Heussner (2008). Jeff Ooi - from digital to political clout? Accessed 15 May 2008 from http://www.Malaysiakini.com.news/78757.

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