# ROOTS

ROOTS International Journal of Multidisciplinary Researches (RIJMR) is a peer reviewed, refereed and quarterly journal. The Journal is assigned by *National Science Library / NISCAIR, New Delhi and* powered & published by *Center for Resource, Research and Publication Services (CRRPS) Tamil Nadu - India*. The journal provides a valid space for academics, researchers and professionals to share the latest developments and advancements in Multidisciplinary Subjects. It aims to foster the exchange of ideas on a range of important international subjects and to provide stimulus for research and the further developments and updating of international perspectives. The international perspective is further enhanced and enriched by the geographical spread of the aspiring contributors.

There are many practical reasons to publish the research articles. We don't really understand what we have discovered until we write it up, when we submit an article for publication, we get back reviews and criticisms from colleagues and readers which undoubtedly can often be very helpful and sometime point our mistakes or shortcomings in the applied logic therein. When we share the results of our efforts through publication, we become a part of the scientific community. We benefit from the exchange of ideas and learn about what others have already done. We can often establish valuable collaborations with people on the other side of the planet even without seeing them. If everybody kept their results and ideas secret, the progress of science would slow to a crawl. If we want to benefit from the work others have done before we, it's only fair that we contribute our bit too. The process of research publication creates a mindset that is vital for research progress.

The scope of the Journal is to facilitate the researchers, scholars, resource persons and practitioners to come on a strong potential platform and to share their findings of the research with the rest of the world. So that intellectual decisions can be instilled to enrich societies as a whole with attitude of magnanimity and openness.

**Dr. S. Balakrishnan**
**Publisher and Managing Editor**
**journalroots4u@gmail.com**
**www.crrps.in**
**09944212131**

**Dr. V. DARLING SELVI**
Associate Professor of Commerce
Rani Anna Government College for
Women , Tirunelveli, Tamil Nadu – India

**Dr.J. BALASUBRAMANIAM**
Assistant Professor
Department of Journalism and Science
Communication
Madurai Kamaraj University
Madurai, Tamil Nadu – India

**Dr. PRADEEP D. WAGHMARE**
Assistant Professor of History
Ramanarain Ruia College
Mumbai– India

**Dr. M. VASIMALAI RAJA**
Associate Professor
Department of Education (DDE)
Alagappa University
Karaikudi, Tamil Nadu – India

**Dr. T. SUDHA**
Associate Professor of Economics
Annamalai University
Chitambram, Tamil Nadu – India

**Dr. S. DIRAVIDAMANI**
Assistant Professor of English
Periyar University College of Arts &
Science,
Salem, Tamil Nadu – India

**Dr. K. KAVIARASU**
Assistant Professor of English
Vivekananda College
Agastheeswaram
Kanyakumari, Tamil Nadu– India

**Dr. S. RAMANATHAN**
Assistant Professor of English
VHNSN College
Virudhunagar, Tamil Nadu– India

**Dr. S. RAJARAJAN**
Assistant Professor of English
Kanchi Mamunivar Government Institute
for   Postgraduate Studies and Research
U.T of  Puducherry– India

**Dr. M. MOOVENDHAN**
Head of the Department
Department of English
Ayya Nadar Janaki Ammal College
Sivakasi, Tamil Nadu– India

**Dr. M. CHITRA**
Assistant Professor
Department of Econometrics
School of Economics
Madurai Kamaraj University
Madurai, Tamil Nadu– India

**Dr. S.C.B. SAMUEL ANBU SELVAN**
Assistant Professor of Commerce
The American College
Madurai, Tamil Nadu– India

**Dr. N. SUNDAR**
Librarian
Thiagarajar College of Preceptors
Madurai, Tamil Nadu– India

**Dr. K. VELLAICHAMY**
Assistant Professor
Department of Education
Madurai Kamaraj University
Madurai, Tamil Nadu– India

**M. RAJESH**
Assistant Professor of Zoology
The American College
Madurai, Tamil Nadu– India

**J.  ALAGIRISWAMY**
Assistant Professor of Economics
Loyola College
Chennai, Tamil Nadu– India

**V.R. SURESH KUMAR**
Head of the Department
PG & Research Department of English
St. Joseph's College of Arts and Science
Cuddalore, Tamil Nadu– India

## GUIDELINES TO AUTHOR

### About Roots

ROOTS International Journal of Multidisciplinary Researches (RIJMR) is a peer reviewed, refereed and quarterly journal. The journal provides a space for academics, researchers and professionals to share the latest developments and– advances in Multidisciplinary Subjects. This journal is an excellent forum for intra disciplinary and interdisciplinary study of various aspects of Arts, Science and Professional Studies as intellectually stimulating open platform for academicians, consultants, researchers, and business practitioners to share and promulgate their research works. Journal of Roots seek to publish research findings and articles that would promote research awareness and understanding dissemination.

### Subjects for Papers

ROOTS Journal expects qualitative and standardized publications of original papers on research in Multidisciplinary  Researches. An Agriculture, Anthropology, Education, Geography, Advertising, Botany, Business Studies, Chemistry, Commerce, Computer Science, Communication Studies, Criminology, Cross Cultural Studies, Demography, Development Studies, Library Science, Mathematics, Methodology, Management Studies, Earth Sciences, Economics, Bioscience, Entrepreneurship, Fisheries, History, Information Science & Technology, Law, Life Sciences, Logistics and Performing Arts (Music, Theatre & Dance), Religious Studies, Visual Arts, Women Studies, Physics, Fine Art, Microbiology, Physical Education, Public Administration, Philosophy, Political Sciences, Psychology, Population Studies, Social Science, Sociology, Social Welfare, Linguistics, Literature, Zoology and other inspiring topics to meet the present trend and craze of aspirants to satisfy them.

### Call for Papers

The journal invites balanced mix of theoretical or empirical, conceptual papers to publish including research articles, case studies, review papers, comparative studies, dissertation chapters, reports of projects in progress, analytical and simulation models, technical notes, and book reviews, leading academicians, business peoples, corporate sectors, researcher scholars and  students  from  academic  institutions,  research  organizations, non  –  governmental organizations (NGOs), corporate sectors, civil societies, industries, and others from India and abroad.

### Submission of Manuscript

1. Submit your article by email to **journalroots4u@gmail.com**.
2. The manuscripts/papers should be research based or related, original and comprise of previously unpublished material and must be presented following scientific methodology.
3. Authors must send an abstract of the paper not exceeding 250 words, all manuscripts must be in font style of Times New Roman, size: 12, line spacing: double spaced and submitted only in MS Word 2003/ 2007 version.
4. All manuscripts should follow the MLA or APA style manual. The full paper must not exceed 3000 words, including tables and references.
5. The manuscript should be well-organized to have Title page, Abstract, Keywords, Introduction, Literature Survey, Problem Definition, Material & Methods, Findings & Results, Interpretation & Discussion, Conclusion and References.

6. All quoted, reproduced material should clearly be referenced.
7. All contents should be original – authors' own words, ideas, findings and arguments.
8. Tables and figures should appear in the document near / after where they are referenced in the text. All figures and tables must have an intelligible caption in relation to the text.
9. Photographs must be sharp, and exhibit good contrast.
10. Correct and complete referencing of quoted and reproduced material is the obligation of the author. In the text, references should be inserted in parentheses in full.
11. If author uses a reference from an out-source, author should cite relevant source giving credit to the original author/contributor.
12. **Review of Article/Manuscript**
    ➢ The manuscript will be numbered and sent to the review committee for review- report.
    ➢ The author will be intimidated of the review and the process will take a maximum period of 15 – 20 days.

## Ethical Policy
1. Authors are advised to adhere to the ethics of publication of his/her article to be considered for publication.
2. Acknowledgement of the original ideas, borrowed from other sources is imperative.
3. The authors of original research work (previously unpublished / under process for the publication elsewhere) should be an accurate submission of the work carried out,
4. provide the rationale of the significance of the research work in context with previous works, and should contain sufficient details to allow others for further research.
5. It will be the wholesome responsibility of the authors for such lapses if any on legal bindings and against ethical code of publication or communication media.

## Plagiarism Alert & Disclaimer
1. The publisher & editors will not be held responsible for any such lapse of the contributor regarding plagiarism and unwarranted quotations in their manuscripts.
2. All submissions should be original and must have a "*statement of declaration*" assuring their research paper as an original and fresh work and it has not been published anywhere else.
3. It will be authors are sole responsibility for such lapses, if any on legal bindings and ethical code of publication.
4. Contributors are advised to be aware about Plagiarism and ensure their paper is beyond plagiarism as per UGC norms.

## Publication Policy & Peer-review Process
Peer review exists to ensure that journals publish article which is of benefit to entire research community. Peer reviewers' comments and recommendations are an essential guide to inform the editor's decision on a manuscript that revisions and improvement. They are part of the publication process and actually help raise the quality of the manuscript. It also helps the readers to trust the research integrity of the article.
1. The Editor-in-Chief will primarily examine each manuscript.
2. The editor-in- Chief will advise the authors about the acceptance of the manuscript by email.
3. The manuscript will be evaluated on parameters of originality, practical importance, subject relevance, scientific level and contribution to the current academic scenario.
4. If the manuscript is accepted following publication policies.
5. Accepted manuscript will be forwarded to the double-blind peer review process. Such that the journal does not disclose the identity of the reviewer(s) to the author(s) and does not disclose the identity of the author(s) to the reviewer(s).
6. The review committee is not responsible for stripping of any information during panel review as the original author is not known to the committee.
7. Manuscript/paper will be published only when the article is 'commended for publication' from the review committee/editorial board.

8. If necessary the copy-editing work will be done by the members of the Editorial Board.
9. The review process may take minimum 20 working days.
10. In case of acceptance of the manuscript and commended for publication favorably, the manuscript will be published in online mode of time. If paper/article/manuscript is not commended for publication, the rejected manuscripts shall not be returned.

## Copyright Notice

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, will not be published elsewhere in the same form, in English or in any other language, without the written consent to the Publisher. The Editors reserve the right to edit or otherwise alter all contributions, but authors will receive proofs for approval before publication.

Copyrights for articles published in *ROOTS International Journal of Multidisciplinary Researches (RIJMR)* are retained by the authors, with first publication rights granted to the journal. The journal/publisher is not responsible for subsequent uses of the work. It is the author's responsibility to bring any infringement action if so desired by the author.

## Indexed

The journal will be indexed as per database norms. The Indexing will provide the manuscript to achieve its purpose of being accessible to worldwide readers. Easy accessible will increase as manuscript's and journal's reputation. It will be a source of the quality information in respective areas/studies.

## Privacy Statement

We may collect the contact details from authors like names, designation with Institutional address, email addresses, postal address, phone numbers and other information to understand needs and provide with a better service that are entered in this journal site and will be used exclusively for the stated purposes of this journal.

## Frequency of Publication of the Journal

Roots are a quarterly journal, will be published in February, May, August and November on respective Years.

## Review and Evaluation Committee

Quarterly review committee meeting will be convened by the editor-in-chief. Authors are expected to submit their manuscript before 20 working days of the publication of the respective month. The journal will be published regularly as per Journal publication policy.

## No article-processing charge Policy

As per our journal policy, No article-processing charge (APC) or publication fee to publish your articles in Bodhi International Journal.

## Get your Roots journal Subscription

We provide personal or institutional Subscription. Subscriber will get all issues within the current year as four issues. No automatic renewal, subscription will expire automatically at the end of the publication year. For subscription, contact email.

## Article Submission

Authors are kindly advised to send manuscripts along with registration & copyright forms. (Duly filled-in Registration form is mandatory with the paper for acceptance) Soft copy of the papers should be mailed to **journalroots4u@gmail.com**

## Conference Proceedings

Roots will be published as special issues for the national / international conference and seminars volumes. The group of papers also will be published in Roots journal.

## Aim & Objectives

Academic Excellence in research is continued promoting in research support for young Scholars. Multidisciplinary of research is motivating all aspects of encounters across disciplines and research fields in an multidisciplinary views, by assembling research groups and consequently projects, supporting publications with this inclination and organizing programmes. Internationalization of research work is the unit seeks to develop its scholarly profile in research through quality of publications. And visibility of research is creating sustainable platforms for research and publication, such as series of Books; motivating dissemination of research results for people and society

## Disclaimer

Contributors are advised to be strict in academic ethics with respect to acknowledgment of the original ideas borrowed from others. The Publisher &Editors will not be held responsible for any such lapse of the contributor regarding plagiarism and unwarranted quotations in their manuscripts. All submissions should be original and must be accompanied by a declaration stating your research paper as an original work and has not been published anywhere else. It will be the sole responsibility of the authors for such lapses, if any on legal bindings and ethical code of publication.

## Communication

Papers/Enquiries should be mailed to Journalroots4u@gmail.com

## CONTENTS

# TEACHING DURING THE PANDEMIC PERIOD: A DETAILED PROJECT REPORT

**Dr. CHETANMEWADA**

*Associate Professor*
*H A College of Commerce, Ahmedabad, Gujarat*

## Abstract

*Entry of the technology, unlocked direction for "Tech-No-Vation". Online courses have changed the scenario of the traditional format of the classroom study which has to a certain extent relaxed parents or the learners by baring high cost. Change of methodology form the grassroots level and develop a new hybrid seed which provide best nutritious value to utilize is the focal creed perception of classroom. In this method, unique teaching method of group based problem solving activities, active learning concept and constructivist ideology and instructive lectures derived as the base model for development. This paper focuses on new study dimensions which need for ongoing classroom situation.*

***Keywords:*** *constructive ideology, EDU-TECH-MENT, classroom, instructive lectures*

## Need of Classroom

Since the Stone Age, man used tools to improve own efficiency and effectiveness with continuous efforts. This historical movement gets support with continuous practical efforts to serve better with the need of human and make the things favorable with the condition. Management fundamental suggests the task that with practical exposure in meaningful manner.

To cultivate interest among students, it is the time of the need to give such task which provides challenge to students and creates interest among them for studies in the form of newspaper articles and online blogs. Newspaper articles and blog posts, there are also complete websites starting to pop up and dedicated to promoting the classroom ideology.

## Definition of Classroom

"Inverting the classroom means that events that have traditionally taken place inside the classroom place outside the classroom and vice versa". It talks about the need to adopt rational terminology and technology for adoption. Flipped classroom is the concept which serves the learning fundamental in different way. Rather than theoretically explanation, adoption of the practical exposure applies it systematically.

**Figure 1 Require human interaction**
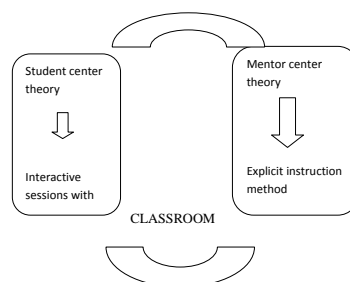
Where a group involves in the task and with co-ordination and co-operation of all persons associated with the learning. Majority of time, the task is associated with assignments or training programme labeled with the flipped classroom concept which exhibits traditional concept of the management learning. But in realistic ground to adopt it need to opt it on practical ground rather than only as a proportion base adoption.

## Objective of Research
- To study the various types of pedagogy adopted by respondent as a part of classroom
- To assess the performance of these respondents after pedagogy
- To evaluate performance measurement with pedagogy among students

## Research Methodology of the Study
## Method of Data Collection
Both Primary and Secondary Data were considered for carrying out the research work.

## Primary Data
Data was Collected from Gandhinagar zone specified villages. From each rural segment the data was collected through structured questionnaires as well as personal interviews.

## Secondary Data
Data was collected from periodicals, journals, articles, magazines, newspapers and websites and other reference material available.

## Sampling Plan
## Universe
The universe for this research was Gujarat. Relating to this study, Gandhinagar is taken and studied different colleges of Gandhinagar.

## Sample size
In this research study total sample collected 150 from which 101 samples were authenticated who filled full questionnaire.

## Sample Plan
Sampling collection method followed was non probability sampling method. In non-probability convenient and judgmental sampling method adopted by the researcher.

## Research Instruments
Questionnaire and Personal Interviews method along with observation were used for collection of Primary data.

## Tools to be Used for Analyzing Data
To present data the graphical tools like pie charts, Bar charts etc. were used.

## Analysis of the Data
## Gender of the Respondents

| Gender | Respondent |
|--------|------------|
| Female | 56 |
| Male | 45 |

In this research major respondents were female 55 percentage and 45 percentage responds were male.

**Age of Respondents**

| Age | Respondent |
|---|---|
| Less Than 20 | 36 |
| 21-25 | 60 |
| 26-30 | 8 |
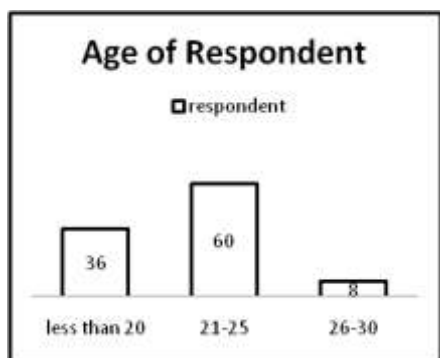


Major respondents belong to age group 21 to 25 – 60 percentages while 36 percentage belongs to age 20 and only 8 percentages were more than 26-30 age group.

**Level of Education Among Respondents**

| Level of Education | Respondent |
|---|---|
| Graduations | 45 |
| Professionals | 1 |
| Pg | 54 |
| Phd | 1 |
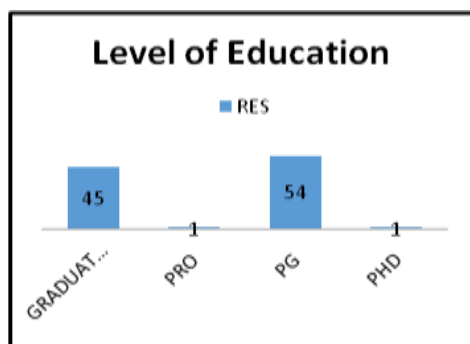


In this research 54 percent respondents were complete post-graduation while 45 percentage respondents were graduate. Professional and Ph.D. respondents were only 1 percent each.

**Do you Like to Study Through Project Techniques?**

| Do you like to study through Project techniques? | Respondent |
|---|---|
| Yes | 99 |
| No | 2 |



While researcher asked whether respondent would like to study through project technique, 98 percent respondent gives positive reply for the same. Only 2 percent were denied.

**Do you feel through project and practical learning helpful in understanding theoretical concept?**

| Do you feel through project and practical learning helpful in understanding theoretical concept? | Respondent |
|---|---|
| Yes | 97 |
| No | 04 |

Respondents believed that with adoption project techniques, it would helpful for them to learn and understand concept in detail and able to learn it in realistic way.

**Which skills proved within you while you work on project?**

| Which skills proved within you while you work on project? | Respondent |
|---|---|
| Communication | 18 |
| Confidence | 16 |
| Enthusiasm | 10 |
| Group cooperation | 14 |
| Group coordination | 14 |
| Team spirit | 27 |
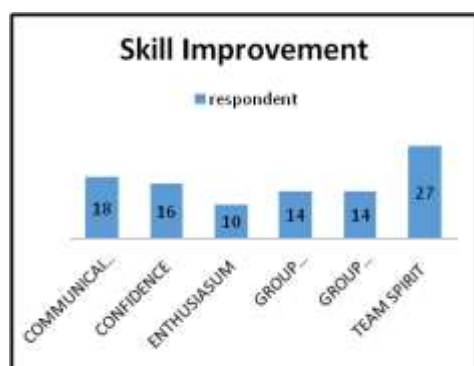


With the project technique, respondents able to develop their team spirit skill at the most. While communication improvement would occupy second place, confidence among them received third place as skill improvement among them.

**Does your mentor provide you guidance for the project?**

| Does your mentor provide you guidance for the project? | Respondent |
|---|---|
| YES | 99 |
| NO | 2 |

Respondents got support from their mentor in the project completion aspect. Which is improve their efficiency towards practical enhancement as under.



**Does your mentor advice improve your efficiency in practical work/ project?**

| Does your mentor advice improve your efficiency in practical work/ project? | Respondent |
|---|---|
| Yes | 90 |
| No | 9 |

## Which skill improves with you in you after guidance?

| Which skill improve with you in you after guidance ? | Respondent |
|---|---|
| Confidence | 12 |
| Deal with diff. minds | 22 |
| Group dymamics 4 | 4 |
| Learning aspect | 18 |
| Positive diversion | 18 |
| Presentation skill | 27 |
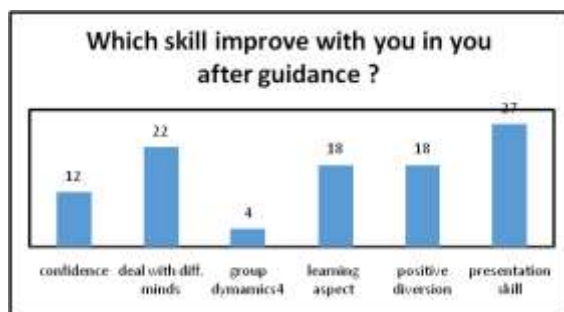


Discussion with mentor will improve within their presentation skills, deal with different mind sets of population and also diverted themselves with positive environment and effective learning among them.

## When you learn any process, technique or method on practical ground you are able to learn-remember it most efficiently?

| When you learn any process, technique or method on practical ground you are able to learn- remember it most efficiently? | Respondent |
|---|---|
| Yes | 96 |
| No | 5 |



This methodology also improves their remembrance power and also helpful for better understating of concepts, learning aspects.

### Finding and Suggestions

Above study reveals the fact that respondents need new changes in the study pedagogy.

- Many of respondents found that project based classroom teaching method is most efficient for their learning.
- Effective enhancement would be with adoption of pedagogy.
- Adoption of films, documentary and cartoon characters make their study more informative and interesting.
- Such method develops those skills which would consider for them as

fear and within group effective skills development would take place.

- Vernacular modes and discussion with classmates makes their learning on realistic bases and also make it easier as a part of learning and remembering.

## References

1. Bishop J. Dr. Verleger M. American Society for Engineering Education, 2013 "The Flipped Classroom: A Survey of the Research"
2. C.E. Hmelo-Silver. Problem-based learning: What and how do students learn? Educational Psychology Review, 16 (3): 235–266, 2004.
3. D. Hestenes, M. Wells, and G. Swackhamer. Force concept inventory. The physics teacher, 30 (3): 141–158, 1992.
4. H. Foot and C. Howe. The psycho educational basis of peer-assisted learning. In K.J. Topping and S.W. Ehly, editors, Peer-Assisted Learning, pages 27–43. Lawrence Erlbaum Associates, 1998.
5. J. Foertsch, G. Moses, J. Strikwerda, and M. Litzkow. Reversing the lecture/homework paradigm using eteach R web-based streaming video software. Journal of Engineering Education-Washington, 91(3):267– 274, 2002.
6. Journal of the Research Center for Educational Technology, 4(2):5–14, 2008.
7. L.S. Vygotsky. Mind and society: The development of higher mental processes. Cambridge, MA: Harvard University Press, 1978.
8. M. Franciszkowicz. Video-based instruction to enhance an active learning environment for general chemistry.
9. R.M. Felder and L.K. Silverman. Learning and teaching styles in engineering education. Engineering education, 78(7):674–681, 1988.
10. R.M. Felder and R. Brent. Designing and teaching courses to satisfy the ABET engineering criteria. Journal of Engineering Education, 92 (1): 7–25, 2003. ISSN 1069-4730.

## Web Sites

Blog Posts & News Articles on The Flipped Classroom:
1. URL http://www.knewton.com/flipped-classroom/.
2. URL http://Www.Npr.Org/2012/12/07/166748835/More-teachers-flipping-the-school-day-upside-down.
3. URL http://techcrunch.com/2012/05/09/move-over-harvard-and-mit-stanford-has-the-real-revolution-in-education/.
4. URL http://electriceducator.blogspot.com/2010/09/flip-your-classroom-through- reverse.html.
5. http://store.britannica.com/.

# INVESTMENT IN EDUCATION: A COMPARATIVE STUDY OF SOFTWARE PROFESSIONALS IN CHENNAI CITY

### Dr. N. SURESH BABU

*Associate Professor, Post Graduate and Research Department of Economics*
*Presidency College (Autonomous), Chennai*

## Abstract

*Experiences of the growth of developed countries reveal that huge investment in human capital will rapidly increase economic growth with the use of the same amount of physical capital. IT industry in India has made tremendous impact on the lives of million people. Both men and women are attracted by Information Technology sector for the lucrative pay. The aim of this paper is to understand the educational background of both men and women software professionals in Chennai city and to find out discrimination in salary for women employees using One Sample Test. The analysis shows that both male and female software professionals had received same pattern of education and they have acquired the necessary skills to get into the IT professionbut there is variation in the monthly income of men and women software professionals in Chennai city. Both Central and State governments should invest more on education to improve the status of women in the society. Qualified men and women employees should be treated equally for promotion and career advancement in IT sector.*

***Keywords***: *human capital, IT sector, women, pattern of education*

## Introduction

Experiences of the growth of developed countries reveal that huge investment in human capital will rapidly increase economic growth with the use of the same amount of physical capital. Thus, human capital is found to be a facilitator for the efficient functioning of physical capital. Human capital theory views education and training as investments in humans for future material pay offs, analogous to investment in physical capital (Ashton & Green 1996). In the knowledge economy, the objectives of a society changes from fulfilling the basic needs of all round development to empowerment. The National Policy of Education (1986, 1992) has recognised not only the need for empowerment of women but also the role of education in bringing about social change. IT industry in India is one of the most significant growth contributors for Indian economy. It has made tremendous impact on the lives of million people. Both men and women are attracted by Information Technology sector for the lucrative pay. A Job in the IT sector ensures a quality life style for their family and holds a lot fascination for onlookers. It is estimated that women constitute 35 per cent of the total IT force compared to 17 per cent in United Kingdom. The aim of this paper is to understand the

educational background of both men and women software professionals in Chennai city and to find out is there any discrimination in salary for women employees.

## Evolution of IT Sector and Human Capital

Education is a key part of strategies to improve individual's well-being and societies, economic and social development. Expenditures on education, whether by the state or households, have been treated as investment flows that build human capital (Schultz 1961; Becker 1964).Developments in information and communication technology are the most important among all the technological revolutions. The computer and related service sector, particularly the software sector, is the booming and ever-expanding sector of Indian economy. Contribution of IT sector to India's GDP has increased from 1.2 percent in financial year 1998 to 8 percent in financial year 2020. According to NASSCOM, revenue of IT sector was US$ 160 billion in 2017. Export revenue was estimated at US$ 99 billion and the domestic revenue of the IT industry was estimated at US$ 48 billion.

## Employment in IT Industry

IT sector has been playing leading role in Indian economy both in terms of GDP and its employment generation capability. The explosive growth of IT sector creates an excessive demand for skilled software development professionals.IT industry is one of an aspiring industry for the young generation. IT industry with its different emerging branches employed both highly skilled youth in hardware and software sectors and people with less technical and formal education in ITES-BPO industry. Hence it has created employment opportunities for both highly skilled and formally graduated. (Kumar and Joseph 2005).

In India shortfall of skilled labour in the future will be a serious threat and the acquisition and their retention is the most important challenge being faced by the industry. Recognizing the importance of retaining the skilled manpower, experts called for declaring a state of 'Educational Emergency' to ensure the supply of skilled software developers. The HRD Ministry plays a facilitating role in ensuring adequate supply and quality of the technical labor force. Ministry policies encouraged creation of private engineering colleges and industry IT training institutions. With the proliferation of new private colleges and IT training institutions, the HRD Ministry developed mechanisms to assure quality control, including the establishment of an All-India Council for Technical Education to regulate technical education, and an accreditation system run by professional societies such as the Computer Society of India to monitor private training institutions.

## Methodology

The exploratory research design is adopted in this study and it is an empirical study based on survey method approach. The primary data has been collected from the sample respondents by using simple random sampling method with the help of structured questionnaire. The multistage stratified random sampling method is adopted for the present study. In first stage the Chennai city has been selected for the study. In the second stage sample software companies from the list of registered companies were selected. Software companies were selected based on the life span and the size of population in each organization. At the third stage, employees from software companied were selected by following proportionate random sampling. The sampling procedure resulted in the selection of 350 software professionals from 15 software companies. The hypotheses framed for the study have been tested by using one-sample test. Pilot study was conducted in June 2018 to validate the questionnaire and final data collection was done during August 2018-November 2018.

## Results and Discussion
### Sex

The sex-wise distribution of the sample respondents is shown in Table 1.

**Table 1: Frequency distribution of sex of the respondents**

| Sex | Frequency | Percent |
|---|---|---|
| Male | 204 | 58.3 |
| Female | 146 | 41.7 |
| Total | 350 | 100.0 |

**Source:** Field Survey.

It is revealed that out of 350 total respondents 58.3 per cent sample respondents is male. Female respondents account for 41.7 per cent. It indicates that women in India are attracted by IT sector for the lucrative pay and they possess required skills to meet the increasing demand for skilled labour in IT sector.

## Pattern of Education

Education is an important aspect of the survey because it persuades the job opportunities of the people and also it assists the employer to identify a perfect person for a job. The gender wisedistribution of respondents based on pattern of education is given in Table 2.

**Table 2: Gender wise distribution of respondents based on pattern of education**

| Pattern of Education in Class Ten | Sex | | Total |
|---|---|---|---|
| | Male | Female | |
| State Board | 43 (21.1) | 26 (17.8) | 69 (19.7) |
| Matriculation | 134 (65.7) | 101 (69.2) | 235 (67.1) |
| CBSE | 27 (13.2) | 19(13) | 46 (13.1) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.

**Note:** Figures in brackets are percentages to the total.

Gender wise discrepancy distribution was not observed with 13 per cent of male and female respondents studying in CBSE schools. Likewise, 65.7 per cent of male respondents and 69 per cent female respondents had studied in matriculation schools. The male respondents who studied in state board schools accounts for 21 per cent compared to 18 per cent of female respondents. Hence in can be inferred that both male and female students are given same pattern of education.

The gender wise distribution of respondents based on medium of instruction is presented in Table 3.

**Table 3: Gender wise distribution of respondents based on medium of instruction**

| Medium of Instruction (X Std) | Sex | | Total |
| --- | --- | --- | --- |
| | Male | Female | |
| English | 172 (84.3) | 123 (84.2) | 295 (84.3) |
| Tamil | 21 (10.3) | 17 (11.6) | 38 (10.9) |
| Others | 11 (5.4) | 6 (4.1) | 17 (4.9) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.
**Note:** Figures in brackets are percentages to the total.

The proportion of female respondents with non-English medium education was found to be 15.7 per cent compared to 15.8 for males. No gender wise discrepancy was found and both male and female software professionals have mostly studied from English medium schools and have acquired the necessary skills to get into the IT profession.

**Location of High School**

Schooling has direct effects on children's educational achievement. There is general per caption that rural schools are inferior to urban schools. This perception goes further to imply that there are rural-urban differences in academic achievement extend to many other socially desirable outcomes such as aptitude, intelligence, interest and aspiration. Location of high school where the respondents were educated is portrayed in Table4.

**Table 4: Gender wise distribution of respondents based on location of high school**

| Location | Sex | | Total |
| --- | --- | --- | --- |
| | Male | Female | |
| Rural | 25 (12.3) | 15 (10.3) | 40 (11.4) |
| Urban | 179 (87.7) | 131 (89.7) | 310 (88.6) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.
**Note:** Figures in brackets are percentages to the total.

It is observed that 88.6 per cent of the respondents had their school education from schools located in urban areas while the remaining 11.4 per cent from schools located in rural areas. Out of 350 respondents, 87.7 per

cent of male respondents and 88.6 per cent of female respondents had their school education from schools located in urban areas. Hence it can be inferred that the majority of the respondents were educated in schools located in urban areas. Here again gender wise discrepancy was not found and the respondents who had their school education from schools located in urban areas got more opportunity to acquire the necessary skills to get into the IT profession.

The gender wise distribution of respondents based on marks scored in tenth standard is shown in Table 5.

**Table 5: Gender wise distribution of respondents based on marks scored in x standard**

| Marks Scored (X Std) | Sex | | Total |
|---|---|---|---|
| | **Male** | **Female** | |
| Below 60 | 6 (2.9) | 9 6.2) | 15 (4.3) |
| 61-70 | 36 (17.6) | 19 (13.0) | 55 (15.7) |
| 71-80 | 69 (33.8) | 39 (26.7) | 108 (30.9) |
| 81-90 | 76 (37.3) | 64 (43.8) | 140 (40.0) |
| Above 91 | 17 (8.3) | 15 (10.3) | 32 (9.1) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.
**Note:** Figures in brackets are percentages to the total.

Out of total respondents, 37 percent of the male respondents and 44 percent of female respondents scored between 81 and 90 percentage marks in tenth standard, likewise one third of male respondents and 26.7 percent of female respondents scored between 71-80 percentage of marks.; 8.3 per cent of male respondents secured above 91 percentage marks when compared to 10.3 per cent of female respondents. The male respondents who scored between 61 and 70 percent of marks account for 17.6 per cent compared to 13 per cent of female respondents. It is also noticed that 3 percent of male respondents and.6 percent of female respondents secured below 60 percent. This analysis reveals that the percentage of marks scored by female software professionals is better compared to male software professionals.

**Pattern of Education**
The gender wisedistribution of respondents based on pattern of higher secondary education is portrayed in Table 6.

**Table 6: Gender wise distribution of respondents based on pattern of higher secondary education**

| Pattern of Education in Higher Secondary | Sex | | Total |
|---|---|---|---|
| | **Male** | **Female** | |
| State Board | 40 (19.6) | 26 (17.8) | 66 (18.9) |
| Matriculation | 139 (68.1) | 103 (70.5) | 242 (69.1) |
| CBSE | 25 (12.3) | 17 (11.6) | 42 (12.0) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.
**Note:** Figures in brackets are percentages to the total

Gender wise discrepancy distribution was not observed much with 12.3 per cent of male respondents and 11.6 per cent of female respondents studying in CBSE schools. Likewise, 68 per cent of male respondents and 70.5 per cent female respondents had studied in matriculation schools. The male respondents who studied in state board schools accounts for 19.6 per cent compared to 18 per cent of female respondents. Hence, in can be inferred that now both male and female students are given same pattern of education. The difference was not found to be statistically insignificant.

## Location of Higher Secondary School

Location of higher secondary school where the respondents were educated is given in Table 7.

**Table 7: Gender wise distribution of respondents based on location of higher secondary school**

| Location | Sex | | Total |
| | Male | Female | |
|---|---|---|---|
| Rural | 32 (15.7) | 14 (9.6) | 46 (13.1) |
| Urban | 172 (84.3) | 132 (90.4) | 304 (88.9) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.

**Note:** Figures in brackets are percentages to the total.

It is observed that 86.9.6 per cent of the respondents had their higher secondary school education from schools located in urban areas while the remaining 13.1 per cent from schools located in rural areas. Out of 350 respondents, 84.3 per cent of male respondents and 90.4 per cent of female respondents had their higher secondary school education from schools located in urban areas. Hence it can be inferred that the majority of the respondents were educated in higher secondary schools located in urban areas. Here again gender wise discrepancy was not found and the respondents who had their higher secondary school education from schools located in urban areas got more opportunity to acquire the necessary skills to get into the IT profession.

## Nature of Schooling

The nature of schooling of the respondents according to the sex of the respondents is presented in Table 8.

**Table 8: Gender wise distribution of respondents based on nature of schooling**

| Nature of Schooling | Sex | | Total |
| | Male | Female | |
|---|---|---|---|
| Government school | 37 (18.1) | 19 (13) | 56 (16.0) |
| Govt-Aided School | 76 (37.3) | 56 (38.4) | 132 (37.7) |
| Private School | 91 (44.6) | 71 (48.6) | 162 (46.3) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.

**Note:** Figures in brackets are percentages to the total

An examination of the gender wise nature of schooling by the sample professionals revealed that 44.6 per cent of the male respondents and 48.6 per cent of female respondents had studied in private schools. Male who had studied in government aided schools account for 37.3 per cent compared to 38.4 per cent of female respondents. It is also evident that 18 per cent of male respondents and 13 per cent of female respondents had their school education at government schools. It is very clear that parents want to provide good education to their children irrespective of sex of the children.

The gender wise distribution of respondents based on marks scored in XII is displayed in Table 9.

## Table 9: Gender wise distribution of respondents based on marks scored in xii standard

| Marks Scored (X Std) (in %) | Sex | | Total |
| | Male | Female | |
|---|---|---|---|
| Less than 80 | 16 (7.8) | 5 (3.4) | 21 (6.0) |
| 81-90 | 95 (48.6) | 78 (53.4) | 173 (49.4) |
| Above 91 | 93 (45.6) | 63 (43.2) | 156 (44.6) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.
**Note:** Figures in brackets are percentages to the total.

Out of total respondents, 46.6 percent of the male respondents and 53.4 percent of female respondents scored between 81 and 90 percentage marks in twelfth standard. Likewise, 45.6 per cent of male respondents secured above 91 percentage marks when compared to 43.2 per cent of female respondents. The male respondents who scored less than 80 percent of marks account for 8 per cent compared to 3.4 per cent of female respondents. This analysis reveals that gender wise discrepancy was not found in the case of percentage of marks scored by female software professionals and male software professionals in twelfth standard.

The gender wise distribution of respondents based on academic performance in higher studies is shown in Table 10.

## Table 10: Gender wise distribution of respondents based on academic performance in higher studies

| Academic Performance | Sex | | Total |
| | Male | Female | |
|---|---|---|---|
| Class 1 | 69 (33.8) | 48 (32.9) | 17 (33.4) |
| Class 2 | 124 (60.8) | 83 (56.8) | 207 (59.1) |
| Outstanding | 11 (5.4) | 15 (10.3) | 26 (7.4) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.
**Note:** Figures in brackets are percentages to the total.

It is revealed one-third of male respondents and about one-third of female respondents in their higher studies got first class in the

examination; 10.3 percent of the female respondents has secured out standing in higher education compared to 5.4 percent of male respondents. It is also noticed that a little more than a six-tenth of male respondents and 57 per cent of female respondents secured second class. It can be inferred from the above analysis that the academic performance of male and female respondents is more or less similar.

The gender wise distribution of respondents based on type of studentship is displayed in Table 11.

### Table 11: Gender wise distribution of respondents based on type of studentship

| Type of Student ship | Sex | | Total |
| | Male | Female | |
|---|---|---|---|
| Day scholar | 124 (60.8) | 88 (60.3) | 212 (60.6) |
| Hostler | 80 (39.2) | 58 (39.7) | 138 (39.4) |
| Total | 204 (100) | 146 (100) | 350 (100) |

Source: Field Survey.

**Note:** Figures in brackets are percentages to the total.

Among the total respondents, six-tenth of male and female sample respondents commuted to their institute daily from their residence or other privately owned place and about four-fifth of sample male and female respondents were hostellers while in higher educational institutions. The overall comparison reveals that there is no significance difference in

studentship of male and female respondents in their higher studies.

## Mode of Getting into the First Job

The gender wise different modes through which respondents got to their first job is shown in Table 12.

### Table 12: Gender wise distribution of respondents based on mode of getting into the first job

| Mode of Getting in to Job | Sex | | Total |
| | Male | Female | |
|---|---|---|---|
| Campus interview | 167 (32.8) | 45 (30.8) | 112 (32.0) |
| Walk in interview | 43 (21.1) | 31 (21.2) | 74(21.1) |
| Consultancy | 40 (19.6) | 27 (18.5) | 67 (19.1) |
| Application | 35 (17.2) | 25 (17.1) | 60 (17.1) |
| Friends | 16 (7.8) | 13 (8.9) | 29 (8.3) |
| Relatives | 3 (1.5) | 4 (2.7) | 7 (2) |
| Others | 0 (0) | 1 (0.7) | 1 (0.3) |
| Total | 204 (100) | 146 (100) | 350 (100) |

Source: Field Survey.

**Note:** Figures in brackets are percentages to the total.

It is found that out of total sample respondents about one-third of the male respondents got their first job through campus interviews when compared to 31 per cent of the female respondents; 21 per cent each of male and female respondents got their first job through walk in interview. Again 17 per cent each of male and female respondents got their first job by

applying to the software companies. The male respondents who got their first job through friends account for 8 per cent compared to 9 per cent of female respondents. Hence it is clear that gender wise discrepancy was not found in the case of mode of getting into first job by the software professionals.

## Mode of Selection in to the Current Job

The gender wise different modes through which respondents got to their current job is displayed in Table 13.

**Table 13: Gender wise distribution of respondents based on mode of getting into the current job**

| Mode of Selection | Sex | | Total |
| --- | --- | --- | --- |
| | Male | Female | |
| Interview | 38 (18.6) | 40 (27.4) | 78 (22.3) |
| Interview& Group Discussion | 95 (45.1) | 58 (39.7) | 150 (42.9) |
| Test & Interview | 63 (30.9) | 42 (28.8) | 105 (30.0) |
| Recommendation | 11 (5.4) | 6 (4.1) | 17 (4.9) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.
**Note:** Figures in brackets are percentages to the total.

It is evident that the majority of the majority of male and female respondents were selected to the current job through interview and group discussion. They account for 45 per cent and 40 per cent respectively. Male respondents who got to the current job through test and interview represent 31 compared to 29 per cent of female respondents. The male respondents who merely faced interview to get into the current job forms 18.6 per cent compared to 27.4 per cent of female respondents.

It clearly exhibits that the recruitment to the current job for all respondents irrespective of sex is purely based on some rigorous methods to test their skill and ability.

## Monthly Income and Sex

The information technology is one of the most lucrative professional fields in India. The high compensations coupled with the great parks and quick growth scopes have made every boy and girl with a high ambition to aim for the sector. The details of monthly income of the respondents according to sex are presented in Table 14.

**Table 14: Gender wise distribution of respondents on the basis of monthly income**

| Income of the Respondents | Sex | | Total |
| --- | --- | --- | --- |
| | Male | Female | |
| Below 30000 | 21 (10.3) | 37 (25.3) | 58 (16.6) |
| 30001-60000 | 86 (42.2) | 99 (67.8) | 185 (52.9) |
| 60001-90000 | 94 (46.1) | 10 (6.8) | 104 (29.7) |
| Above 90001 | 3 (1.5) | 0 (0) | 3 (0.9) |
| Total | 204 (100) | 146 (100) | 350 (100) |

**Source:** Field Survey.
**Note:** Figures in brackets are percentages to the total.

It is revealed that the monthly income of 46 percentage of the male respondents is between Rs.61000 and Rs.90000 compared to only 7 per cent of female respondents; 1.5 per cent of male respondents earn more than Rs.90000 per month compared to none of female respondents. One fourth of female respondents earn less than Rs.30000 per month compared to 10 per cent of male respondent. Monthly income of a little more than two third of female respondents and 42 per cent of male respondents is between Rs.60001 and Rs.90000.It divulges the better economic status of the male software professionals compared to female software professionals.

## Null Hypothesis (H0)

There is no significant variation in the monthly income of men and women software professionals in Chennai city

## Alternative Hypothesis (H1)

There is significant variation in the monthly income of men and women software professionals in Chennai city.

This hypothesis is tested through one-sample test by taking monthly income of the male and female monthly income of the respondents as the testing variable and the test result is shown in Table 15.

| Monthly Income of the Respondents | | | |
|---|---|---|---|
| Sex | Mean | N | Std. Deviation |
| Male | 57598.0000 | 204 | 19370.26303 |
| Female | 39527.0000 | 146 | 12829.48931 |
| Total | 50060.0000 | 350 | 19137.69589 |

| One-Sample Test | | | | | | |
|---|---|---|---|---|---|---|
| | t-value | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| Monthly income of the respondents | 48.937*** | 349 | 0.000 | 50060.000 | 48048.0721 | 52071.9279 |

**Note:** ***1 percent level of significance.
**Source:** Computed from primary data.

It is understood from the table the calculated t-value of 48.9378 is statistically significant at 1 percent and thus, the null hypothesis is rejected. This underlines the point that there is significant variation in the monthly income of men and women software professionals in Chennai city. It shows the discrimination in the earnings between men andwomen software professionals. Women are perceived to have less favorable chances for promotion than men because job performanceratings on career advancement prospects is stronger among males compared to females.

## Conclusion

Women in India are attracted by IT sector for the lucrative pay and they

possess required skills to meet the increasing demand for skilled labour in IT sector.The difference in the pattern of education between male female software professionals was statistically insignificant.Both of them have acquired the necessary skills to get into the IT profession. One sample resultshowthat there is variation in the monthly income of men and women software professionals in Chennai city. It is therefore suggested that both central and state governments should invest more on education to improve the status of women in the society.Both qualified men and women employees should be treated equally for promotion and career advancement in IT sector.

## References

1. Ashton & Green (1996): "Education, Training and the Global Economy"Edward Elgar Publishing Limited, England.
2. Becker, Gary S. (1964): "*Human Capital*" New York: National Bureau of Economic Research.
3. Nagesh Kumar and K.J. Joseph(2005)"Export of Software and Business Process Outsourcing from Developing Countries: Lessons from the Indian Experience" Asia-Pacific Trade and Investment Review Vol. 1, No. 1, April
4. Schultz, T.W. (1961): "Investment in Human Capital." *American Economic Review* (March).

# AN EXPLORATION ON THE EXTENT OF INCOME INEQUALITY IN TAMIL NADU

**Dr. K. RAMESH**

*Associate Professor, Department of Economics*
*Presidency College, Chennai*

## Abstract

*Income from factors is the flow of earnings of an individual or a country from the supply of labour or from ownership of land and capital. It is the total of wages, salaries, profits, interest payments, rents and other factor income received in a given period of time. Income distribution denotes the proportion of people who come under a given level of income or wage. Income inequality is inevitable, since total equality of income levels among the people of a country is well nigh impossible. This study found out that the degree of inequality is the highest among those who are employed in the service sector, since it offers both very high income employments on the one hand and very low income employment, like part time and temporary employment on the other. In the case of agricultural sector, general income level is the least, while the degree of inequality is less than that of the service sector.*

***Keywords***: *income, expenditure, sector, distribution, inequality*

## Introduction

Factor income, in economics, is the flow of earnings of an individual or a country from the supply of labour or from ownership of land and capital. Thus, it is the total of wages, salaries, profits, interest payments, rents and other factor income received in a given period of time. Income distribution is the way in which a nation's total gross domestic product is shared among its people. The term 'income distribution' denotes the pattern in which how income is spread or distributed among the individuals in the economy. It indicates the proportion of people who come under a given level of income or wage. Income inequality is inevitable, since total equality of income levels among the people of a country is well nigh impossible. Moreover, some

amount of income inequality is expected, as it will lead to increased savings and investment. Hence, the income levels of the households which depend on different sectors of the economy differ, which also force similar changes in the expenditure levels among them. So, it is warranted to examine the income and expenditure pattern of the households who are engaged in different sectors of the economy.

## Literature Review

Bardhan (1975) found that during this period of not so high growth, distribution as measured by Gini ratio declined marginally, both for rural and urban sectors. Mathur (1983) analysed the sectoral income disparities by using coefficients of variation and

found that the primary sector displayed a marked narrowing down tendency till the sixties. Thereafter, the regional disparities in this sector started increasing at a fast pace, although this process appeared to have been arrested during the first half of the seventies. Sarkar (1994) showed that Punjab had a highest score while Bihar had the lowest score. Grow, while those were growing started to stagnate. Datt and Mukherjee (2000) found significant trends in both rural and urban distribution for many states, which was quite contrary to the notion common in certain circles that distribution is a random variable which oscillates within a trend. Dreze and Srinivasan (2000) showed that the headcount index of rural poverty has declined in almost all regions, but there are larger inter-regional disparities in per capita expenditure which remained unchanged, though there was some divergence in headcount ratios. Bhalla (2003) reported that the urban and rural Gini coefficients decreased during the post-reform period. However, the decrease has taken place in most of the major states in the rural areas, but only in a few in the urban areas.

## Objectives and Methods

This paper examines the extent of variations in the economic conditions of the sample households and the level of inequality in their income and expenditure. For this purpose, Tiruvannamalai District from Tamil Nadu has been selected as the sample district, from which 478 households have been identified as the sample households.

## Extent of Variation in the Economic Conditions of the Respondents

This section presents the mean, standard deviation, minimum and maximum values of these variables on the basis of their expenditure quartile to which the respondents' belong. The quartile-wise descriptive statistics is presented in Table – 1 in which the respondents are grouped under four quartiles on the basis of their monthly household expenditure, viz., $Q_1$, $Q_2$, $Q_3$ and $Q_4$ in which $Q_4$ being the highest expenditure quartile.

The table reveals that the mean values, minimum and maximum values of all variables are higher among the respondents who come under the fourth and the highest quartile and it successively declines to $Q_3$ respondents to $Q_2$ and the values are the least in $Q_1$. Those engaged in agriculture and as unskilled workers in the non-agricultural sector, the female workers and those who belong to the SC and ST community fall in the $Q_1$ class, while in the case of the highest quartile, those who are employed in the organised sector and those with higher qualification, which mostly comprise of male, those who belonging to the OC and BC community and those who are engaged in the higher levels of designation in the service sector are found.

### Table 1: Quartile-wise extent of economic variations

| Variables | Mean | SD | Mini | Max |
|---|---|---|---|---|
| **Q1** | | | | |
| Monthly Income | 12640 | 10625.1 | 6000 | 21000 |
| Value of Consumer Durables | 115600 | 96458.3 | 95000 | 500000 |
| Monthly Savings | 1875 | 2375.1 | Nil | 3250 |
| Food Expenditure | 2140 | 2433.3 | 1500 | 3750 |
| Non-Food Expenditure | 3675 | 3710.9 | 1950 | 5460 |
| No. of Days Employed | 184 | 195.1 | 90 | 250 |
| Monthly Per Capita Income | 1675 | 1964.7 | 775 | 3500 |
| **Q2** | | | | |
| Monthly Income | 20440 | 17553.8 | 12500 | 45000 |
| Value of Consumer Durables | 185900 | 86452.2 | 145000 | 750000 |
| Monthly Savings | 3640 | 3147.9 | 1500 | 5750 |
| Food Expenditure | 3675 | 3366.2 | 2150 | 3560 |
| Non-Food Expenditure | 5545 | 5010.7 | 3645 | 7140 |
| No. of Days Employed | 262 | 255.3 | 165 | 365 |
| Monthly Per Capita Income | 3235 | 3113.4 | 2560 | 6580 |
| **Q3** | | | | |
| Monthly Income | 29675 | 24109.3 | 22500 | 85000 |
| Value of Consumer Durables | 226860 | 71784.4 | 195000 | 1500000 |
| Monthly Savings | 5145 | 5052.4 | 3485 | 8450 |
| Food Expenditure | 4520 | 3948.3 | 3240 | 4680 |
| Non-Food Expenditure | 7260 | 6977.4 | 5870 | 9500 |
| No. of Days Employed | 331 | 277.8 | 250 | 365 |
| Monthly Per Capita Income | 6870 | 4018.9 | 4580 | 12500 |
| **Q4** | | | | |
| Monthly Income | 62565 | 29608.7 | 50000 | 150000 |
| Value of Consumer Durables | 355700 | 79442.1 | 300000 | 2500000 |
| Monthly Savings | 8590 | 6245.3 | 6120 | 15000 |
| Food Expenditure | 5345 | 4772.2 | 4760 | 8675 |
| Non-Food Expenditure | 9875 | 7905.6 | 7500 | 15000 |
| No. of Days Employed | 342 | 321.5 | 300 | 365 |
| Monthly Per Capita Income | 13655 | 4655.8 | 10000 | 30000 |

**Source:** Computed from field survey data.

### Extent of Income Inequality

The presence of inequality among the respondents is further examined in this section with the application of Gini-index, co-efficient of variation (CV), Hoover index and Theil index. The data

collected from the sample are placed from smallest to largest values of the variable of interest, the formula to calculate Gini-index is:

$$G = \frac{\sum_{i=1}^{n}(2i-n-1)x'_i}{n^2\mu},$$

where $i$ is the individual's rank order number, n is the number of total individuals, $x'_i$ is the individual's variable value, and $\mu$ is the overall average. The Gini coefficient is a full-information measure, taking all segments of the distribution into consideration. It enables direct comparison of any two groups, irrespective of their sizes. Thus, under Gini coefficient, it is possible to compare the inequality between the state and country.

The Hoover index is also a measure of income inequality, which measures the amount of income that needs to be redistributed among the population so that perfect income equality is achieved. This index represents income distribution on a scale ranging from zero to one, or perfect equality to maximum inequality. It is computed with the following formula:

$$H = \frac{1}{2}\sum_{i=1}^{N}\left|\frac{E_i}{E_{\text{total}}} - \frac{A_i}{A_{\text{total}}}\right|.$$

where, H is the Hoover index, $E_i$ is income of the $i^{th}$ segment and $E_{total}$ is the total income of the population, $A_i$ is the number of earners in the $i^{th}$ segment, while $A_{total}$ is the total number of earners in the population.

The Theil index measures the weighted average of inequality within subgroups, and also the inequality between those subgroups. It is measured with this formula:

$$T = \sum_{p=1}^{n}\left\{\left(\frac{1}{n}\right)*\left(\frac{y_p}{\mu_y}\right)*\ln\left(\frac{y_p}{\mu_y}\right)\right\}$$

where, T is the Theil index, $n$ is the number of individuals in the population, $y_p$ is the income of the person indexed by $p$, and $\mu_y$ is the population's average income. If every individual has exactly the same income, $T$ will be zero; this represents perfect equality and is the minimum value of Theil's T. If one individual has all of the income, $T$ will equal ln $n$; this represents utmost inequality and is the maximum value of Theil's T statistic.

Table – 2 presents Gini coefficient, CV, Hoover index and Theil index of the different sub-groups of the sample respondents pertaining to their monthly income as well as their monthly household expenditure.

**Table 2: Extent of Inequality in Income and Expenditure**

| Category | Income | | | | Expenditure | | | |
|---|---|---|---|---|---|---|---|---|
| | Gini | CV (in %) | Hoover | Theil | Gini | CV (in %) | Hoover | Theil |
| Male | 0.4612 | 87.226 | 0.2417 | 0.1812 | 0.4723 | 87.317 | 0.2107 | 0.1639 |
| Female | 0.5536 | 89.352 | 0.4009 | 0.4373 | 0.5347 | 89.738 | 0.3742 | 0.4238 |
| Arani | 0.4472 | 72.334 | 0.2793 | 0.2496 | 0.4077 | 73.596 | 0.2613 | 0.2246 |

| Chengam | 0.5774 | 86.752 | 0.3426 | 0.3217 | 0.4867 | 87.663 | 0.3172 | 0.3166 |
|---|---|---|---|---|---|---|---|---|
| OC | 0.3049 | 45.135 | 0.1876 | 0.1307 | 0.3129 | 46.765 | 0.1729 | 0.1244 |
| BC | 0.3593 | 50.751 | 0.2569 | 0.1846 | 0.3349 | 51.723 | 0.2413 | 0.1830 |
| MBC | 0.4979 | 62.396 | 0.3376 | 0.2834 | 0.5107 | 60.425 | 0.3072 | 0.2563 |
| SC and ST | 0.6427 | 73.934 | 0.4026 | 0.4517 | 0.6278 | 71.934 | 0.3629 | 0.4231 |
| Agriculture | 0.5023 | 57.349 | 0.4319 | 0.4326 | 0.4739 | 55.761 | 0.4173 | 0.4069 |
| Industry | 0.3543 | 50.018 | 0.2408 | 0.1814 | 0.3462 | 49.121 | 0.2135 | 0.1674 |
| Service | 0.6912 | 63.228 | 0.7546 | 0.4407 | 0.6681 | 61.712 | 0.7294 | 0.4117 |

**Source:** Computed from field survey data.

It is noted that the level of variation in the monthly income levels of the male respondents is considerably less than the variation in the income of the female respondents, signifying the fact that the latter's income is not only low, but also varies markedly. In the case of Hoover index, male respondents' income inequality stands at 0.2417, which is 0.4009 among the female respondents. This underlines the fact that in the case of male respondents, the top 24 percent of the respondents' income needs to be redistributed to achieve perfect income equality, while it is 40 percent in the case of female respondents. The male and female respondents' income inequality in the case of Theil index also reinforces greater inequality among the latter (0.4373) than that of the former (0.1812).

In terms of community of the respondents, income inequality under the Gini index shows that it stands at 0.3049 among the OC respondents, 0.3593 among the BC respondents, 0.4979 in the case of MBC respondents and 0.6427 among the SC and ST respondents. Thus, income inequality of the SC and ST respondents is the highest among the total respondents which declines as one goes from MBC, BC and OC respondents and this pattern is underlined under the other measures as well.

The degree of income equality is the highest among those who are engaged in the service sector followed by those who are engaged in agriculture and then in the industrial sector in the declining order. Income inequality is the highest in the service sector, as it provides very high income and also very low income. Other measures like CV, Hoover index and Theil index also presents the same trend.

However, the degree of expenditure inequality is less than income inequality in the case of male and female respondents. This implies that low income levels of the respondents force them to seek sources other than income to meet out their household expenditure, which pulls down the degree of inequality under this measure. This is also seen under other measures, where the degree of inequality is higher among the females than that of males, while the degree of expenditure inequality is less than the income inequality. This suggests that

the degree of inequality is the highest among those who are employed in the service sector, since it offers both very high income employments on the one hand and very low income employment, like part time and temporary employment on the other. In the case of agricultural sector, general income level is the least, while the degree of inequality is less than that of the service sector. Hence, the extent of inequality shows that it is higher among the females than male respondents; the rural inequality is higher than that of urban inequality; it is the highest among the SC and ST respondents and declines among the MBC, BC, OC respondents in that order; and inequality is the highest in the service sector, followed by that of agricultural and the industrial sector.

## Factors Influencing Income Inequality

The inequality in the monthly income levels of the respondents is the outcome of their levels of education and other factors like age. Better education facilitates them to seek employment which is more regular which also provides higher income. Moreover, age levels of the respondents also influence their earning capacity not only through their education, but also through their mobility. This hypothesis is tested with the application of a regression model in which monthly income of the respondents is taken as the dependent variable, while age, levels of education and employment are considered as the independent variable. The model is specified as follows:

$$INC_i = \alpha + \beta_1 AREA_i + \beta_2 GEN_i + \beta_3 AGE_i + \beta_4 EDU_i + \beta_5 COM_i + \beta_6 EMP_i + u_i$$

in which, $INC_i$ is the monthly income of the $i^{th}$ respondent; $AREA_i$ is the taluk of the the$i^{th}$ respondent (Chengam=1 and Arani=2); $GEN_i$ is gender, where female=1 and male=2; $AGE_i$ is the age level, $EDU_i$ is the level of education and EMP is the sector in which he/she is employed (agriculture = 0 and non-agriculture = 1) and $COM_i$ is community (MBC and SC and ST=1 and OC and BC=2); $\alpha$ is the intercept term, $\beta$ is the slope co-efficient and u is the error term. INC is taken in log form (ln) to make the result more robust. The regression estimate is shown in Table – 3.

### Table 3: Regression Estimates: Factors of Monthly Income

| Variable | Coefficients | t-vale | Sig. |
|---|---|---|---|
| Constant | 0.8137 | **11.388*** | 0.000 |
| Area | 0.4725 | **5.873*** | 0.000 |
| Gender | 0.5611 | **6.472*** | 0.000 |
| Age | -0.6149 | **-7.928*** | 0.000 |
| Educational Level | 0.6905 | **9.047*** | 0.000 |
| Community | 0.4134 | **4.423*** | 0.000 |
| Employment | 0.7892 | **9.852*** | 0.000 |
| Adj.$R^2$ | **0.647** | | |
| F-value | **189.663*** | | |
| Sig. | **0.000** | | |

**Note:** ***indicates 1 percent level of significance.

**Source:** Computed from field survey data

It is inferred that the t-values of all the independent variables are statistically significant at 1 percent level, which shows the significant

relationship between monthly income of the respondents and their area, gender, age, education, community and employment. All variables with the exception of age have attained a positive sign. The negative sign for 'age' indicates that the younger respondents earn more than the older respondents which is particularly true in the case of agricultural and service sectors, which is also influenced by the level of education. Those who are younger are more mobile than older respondents, and thus, can move to the areas where they can get more regular employment and also a higher income. Similarly, those with better education can always find better paid and more regular employment. This enables the respondents to earn more compared to those with less education. Area also influences the level of income, since those who more urban based can provide better diversification of employment and thus it is significant in influencing the earning capacity. Similarly, the positive sign for employment suggests that those who are engaged in agriculture earn less than those who are employed in the non-agricultural sector. Among the factors, employment has attained the highest beta value of 0.7892, which suggests that being in the non-agricultural sector is capable of pushing the earning capacity up by 0.78 units, which is followed by educational level, which shows that higher level of education increases the level of income by 0.69 units, lower age (0.61 units), males earn more than females by 0.56 units and those who are located in Arani earn more than those who reside in Chengam taluk by 0.47 units. The model explains more than 64 percent of the changes in the dependent variable as suggested by the adjusted $R^2$ value.

## Conclusion

The income levels of the male headed households, those who belong to Arani taluk and the OC and BC respondents are higher compared to the reference category. This emanates from the differences in the number of days employed and the nature of employment, in which the latter is the necessary and satisfying condition. Participation in the Government programme has not enabled the female headed households, MBC and SC and ST households and those who are residing in Chengam taluk to overcome the deficiency in their income level, since the mandatory limit of 100 days of employment has not been provided and their over dependence on agriculture is more daunting. The differences in their income level are also reflected in their spending and saving capacity. The degree of income inequality thus, is quite severe among the female headed, MBC and SC and ST, those who belong to Chengam and those who depend on agriculture as against the reference category. Hence, a greater proportion of the female headed, MBC and SC and ST, those who belong to Chengam and those who depend on

agriculture come under the BPL category compared to the male headed, OC and BC, those who reside in Arani and those who depend on the non-agricultural sector.

## References

1. Bardhan, P.K. (1975), "The Pattern of Income Distribution in India: A Review", in T.N. Srinivasan and P.K. Bardhan (eds.), *Poverty and Income Distribution in India*, Calcutta: Statistical Publishing Society, pp. 103-137.
2. Bhalla, Surjit, (2003), "Income Inequality: An Empirical Analysis", *Development and Change*, December, pp. 45-54.
3. Datt, Gaurav and Sanjukta Mukherjee (2000), "Looking Beyond the Kuznets Hill? A Characterization of the Evolution of Inequality in India During 1960-94", *Journal of Quantitative Economics*, Vol. 16, No.1, January, pp. 41-44.
4. Dreze, Jean and P.V. Srinivasan (2000), "Poverty and Inequality in India: Evidence from Regional Data", *Journal of Quantitative Economics,* Vol.16, No.1, January, pp. 32-36.
5. Mathur A.(1983), "Regional Development and Income Disparities in India: A Sectoral Analysis", *Economic Development and Cultural Change*, Vol.31, No.3, April, pp. 475-505.
6. Sarker, P.C. (1994), "Regional Imbalances in Indian Economy over Plan Periods", *Economic and Political Weekly*, March 12, Vol. XXIX, No. 2, pp. 621-633.

# CUSTOMER'S PERCEPTION AND COGNIZANCE ABOUT SMALL FINANCE BANKS IN MADURAI DISTRICT

**A. HUSSAIN SYED IBRAHIM**
*Assistant Professor, P.G. Department of Commerce*
*M.S.S. Wakf Board College, Madurai*

## Abstract
*Financial system of the nation provides the necessary financial inputs for the production goods and services which consequently assist in augmenting the welfare and living conditions of that nation. The commercial banks are playing a vital role in the financial system. However, still there is a large number of people are unserved from the existing system. Both Government of India and Reserve Bank of India have been taking number of initiatives to bring financially excluded people in to formal financial system. Small Finance Banks are recent banking initiative of Reserve Bank of India towards promotion of financial inclusion of unbanked population. They are expected to cater to the financial needs of priority sector. Hence the researcher is intended to scrutinize the perception and Cognizance of customers regarding Small Finance Banks in Madurai District.*
***Keywords:*** *small finance banks, financial inclusion, cognizance*

## Introduction

The economic wellbeing and quality of life of a nation is normally based on an orderly and efficient financial system. It contributes financially to produce goods and services which consequently assist in augmenting the welfare and living conditions of that nation. The commercial banks has become an integral part of the financial system. The Indian economy has burgeoned in the preceding decades and excellently progressed in the liberalization and globalization of the economy. However there is a large number of population who are still excluded and unserved by the existing commercial Banks. The data that follows exhibits India's unbanked population from 2011 - 2017

**Table 1: Unbanked Population in India**

| Year | Unbanked Population (in millions) |
|------|-----------------------------------|
| 2011 | 557 |
| 2014 | 415 |
| 2015 | 233 |
| 2017 | 190 |

**Source:** Price water house Coopers (PWC) India 2015 report, World Bank Findex Report 2017.

From the above data it can be concluded that the unbanked population has been strikingly dwindled but there is still an impressively large population, who are unbanked or informally banked. The government of India as well as the Reserve Bank of India has instigated a

number of initiatives for the inclusion of the financially excluded population into formal financial structure. But these initiatives have not yielded an estimated outcome, which mirrors the defects in this system. All sections of the society has to be incorporated to the financial services, to develop and promote the economy of any nation or society. As an initiative, the Reserve Bank of India has launched a financial inclusion policy, by establishing a unique bank in our country in the year 2015. A provisional license has been issued for nearly ten companies to support and financially include the financially excluded section, who are unable to obtain the service of the existing commercial banks, on September 17, 2015. These banks performed as small finance banks in India.

## Statement of the Problem

The basic banking undertakings that includes acceptance of deposits and granting loans to the unbanked population is carried out by the small finance banks. These banks too follow the same prudential norms and regulations applicable to other commercial banks, which also includes maintenance of Cash Reserve Ratio and Statutory Liquidity Ratio. 75% of the adjusted Net Bank Credit of Small Finance Banks has to be extended to priority sector. The principal objective of these small finance banks is to cater to the requirements of the small marginal farmers, micro and small business concerns and unorganized sector firms. Nevertheless the questions which ought to be answered here are as follows

1) Are the Small Finance Banks capable of sustaining in the banking business countering the challenges in a long period?
2) Could these banks serve underprivileged population over a period of time?

Hence this paper is intended to scrutinize the perception and Cognizance of customers regarding Small Finance Banks in Madurai District.

## Objectives of the Study

1) To estimate the Cognizance level of customers regarding small finance banks.
2) To examine the customer's perception on small finance banks.

## Methodology
### Sources of Data

Both primary as well as secondary data are taken into account for this study. Primary data are collected from the respondents through a well-structured Interview schedule. Secondary data are provided by various popular books, scholarly articles and prominent websites of various dailies and official websites of Small Finance Banks.

## Sample Design

The responses of fifty people were randomly selected as samples from the overall population to conduct this study

by adopting a convenient method of sampling.

## Tools for Analysis

The data collected are categorized and tabulated for further analysis. The statistical tools, namely percentage analysis and weighted mean score are applied for analysis to interpret the valuable solutions.

## Analysis and Interpretation
## Socio-Economic Profile

The socio demographic variables of the respondents are analyzed in percentages.

### Table 2: Socio–Demographic Profile of the Respondents

| Socio-economic variables | | No. of respondents | Percentage |
|---|---|---|---|
| Age | Less than 25 | 6 | 12 |
| | 25-35 | 21 | 42 |
| | 35-45 | 16 | 32 |
| | Above 45 | 7 | 14 |
| Gender | Male | 14 | 28 |
| | Female | 36 | 72 |
| Educational qualification | No formal education | 4 | 8 |
| | School level | 32 | 64 |
| | College level | 7 | 14 |
| | Others | 7 | 14 |
| Family Income per month (inRs.) | Below 10,000 | 11 | 22 |
| | 10,000 to 20,000 | 28 | 56 |
| | 20,000 to 30,000 | 7 | 14 |
| | Above 30,000 | 4 | 8 |

**Source:** Primary Data

From the above data, regarding socio demographic variables, it is inferred that most of the respondents belong to the age group of 25 – 35 (42%), Female respondents form the majority (72%) and those having an academic profile of education upto the school level (64%), and a family income between Rs. 10,000 to 20,000 per month (56%)

## Cognizance Level about Small Finance Banks

The Cognizance level of respondents about Small finance Banks are evaluated through weighted mean score. The opinions and perception of respondents towards Small Financial Banks are studied through Likert's five point analysis.

### Table 3: Cognizance level of respondents about small finance banks in Madurai district

| S. No | Statements (regarding Cognizance about Small Finance Banks) | Very High (5) | High (4) | Medium (3) | Low (2) | Very Low (1) | Total | Total weighted score | Weighted Mean Score |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Concept | 15 | 22 | 7 | 5 | 1 | 50 | 195 | 3.9 |
| 2. | Objectives | 11 | 17 | 8 | 9 | 5 | 50 | 170 | 3.4 |
| 3. | Locations in Madurai District | 23 | 18 | 5 | 3 | 1 | 50 | 227 | 4.54 |
| 4. | Services offered(Deposits/ loans) | 16 | 25 | 6 | 2 | 1 | 50 | 203 | 4.06 |
| 5. | Operations | 5 | 9 | 6 | 28 | 2 | 50 | 137 | 2.74 |

**Source:** Primary Data

The above data clearly exhibits that, most of the respondents are more cognizant of the services offered by the Small Finance Banks (4.06) and locations of Small Finance Banks in Madurai but are incognizant about the operations of Small Financial Banks (2.74).

**Perception of Respondents about Small Financial Banks**

The Perception of respondents about Small finance Banks are analysed through weighted mean score.

### Table 4: Perception of respondents towards small financial banks in Madurai district

| S. No | Statements | Strongly Agree (5) | Agree (4) | Neutral (3) | Disagree (2) | Strongly disagree (1) | Total | Total weighted score | Weighted Mean Score |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Loan Schemes offered are attractive | 8` | 19 | 17 | 3 | 3 | 50 | 176 | 3.52 |
| 2 | loan sanctioning procedures are easy and speedy | 12 | 29 | 6 | 2 | 1 | 50 | 228 | 4.56 |
| 3 | Interest rate charged are nominal | 7 | 11 | 5 | 19 | 8 | 50 | 140 | 2.80 |
| 4 | Loan Repayment schedule is convenient | 15 | 18 | 8 | 6 | 3 | 50 | 186 | 3.72 |
| 5 | Aids financial | 14 | 20 | 9 | 6 | 1 | 50 | 190 | 3.80 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | help to Women Self Help Groups | | | | | | | |
| 6 | Helpful for poor and needy people | 9 | 26 | 10 | 3 | 2 | 50 | 187 | 3.74 |
| 7. | Helps to relieve from the local money lenders | 14 | 29 | 4 | 3 | 0 | 50 | 204 | 4.08 |
| 8. | General functioning is good | 5 | 15 | 24 | 3 | 3 | 50 | 166 | 3.32 |

**Source:** Primary Data

From the above data it is inferred that the respondents are highly satisfied with loan sanctioning procedures and the respondents agreed that the introduction of Small Finance Banks relieved them from the clutches of local money lenders. However they are discontented by the charges in the interest rates of Small Finance Banks.

**Findings**

1) Since the unbanked Population was noticeably dwindling from 557 million to 190 million, initiatives have been taken by the Indian Government as well as Reserve Bank of India towards financial inclusion of the unserved and underserved sections to make the scheme accomplish the desired result.

2) Reserve Bank of India aimed to shape the main structure of Small finance bank with the new initiative to cater to the financial needs of the underprivileged sections of the society, thereby enhancing the financial inclusion program.

3) The Respondents are much cognizant of the Small Finance Banks but not the operations performed by them.

4) The Respondents are satisfied with all the variables except the rate of interest charged by the Small Financial Banks.

**Suggestions**

1) The Reserve Bank of India should take necessary steps to issue licenses to more Small financial companies in order to cater to the needs of target groups.

2) The Small Finance Banks are expected to create comprehensive awareness among the people about its operations.

3) The Reserve Bank of India should take compelling steps to reduce the interest rate of loans provided by Small Financial Banks.

4) The Reserve Bank of India must scrutinize the Small Finance Banks

additionally to strengthen their governance structures.

## Conclusion

This treatise examines the Cognizance and perception about the Small Finance Banks in Madurai district. Indian Government and Reserve Bank of India have been taking number of initiatives to bring financially excluded people in to formal financial system. Small Finance Banks are recent banking initiative of Reserve Bank of India towards promotion of financial inclusion of unbanked population. They are expected to cater to the financial needs of priority sector such as small businesses, unorganized sector, low income households and farmers. Out of the ten institutions that have been granted provisional licenses, eight are the institutions converted from Micro Finance Institutions. Since such institutions already have a track record of providing scalable microcredit services, they perform considerably well and they have good potential all over the area taken for this study and includes financially excluded people at large. The study reveals that there is high Cognizance and an optimistic attitude among the respondents towards Small Financial Banks. The financial inclusion of all sections of society will only lead to the Inclusive and sustainable growth of our economy. The initiatives taken by the Indian government and Reserve Bank of India towards the financial inclusion such as small finance banks is a milestone and helps to achieve the goal is an indubitable truth.

## References

1. Indian Institute of Banking and Finance, (2018) "Small Finance Banks" Taxmann Publications Pvt. Ltd. Pp 3- 8
2. Jayadev M, Himanshu Singh, Pawan Kumar, Small finance banks: challenges, IIMBManagementReview (2017), https://doi.org/doi:10.1016/j.iimb.2017.10.001
3. Vswan M G (2017), A study on the awareness and perception about small finance bank with special reference to ESAF small finance bank, Volume 6, Issue 4, ISSN- 2277- 1166.
4. NachiketMor Committee report 2014 – published by the RBI
5. Compendium of guidelines for Small Finance Banks- issued by RBI
6. Financial Inclusion in India- An assessment – a report published by RBI [4] Global Findex Database 2017, a report by World Bank.
7. CrisilInclusix—a report by CRISIL February 2018
8. Shifting trends in the microfinance ecosystem- Price Water Cooper report Nov 2016.
9. Evolving landscape of microfinance institutions in India – Ernst & Young report 2016.
10. Small Finance Banks: What can we learn from Indian experience- a Micro Save report

# MAGICAL REALISM IN CHITRA BANERJEE DIVAKARUNI'S THE MISTRESS OF SPICES

**U. MUTHUPRIYA**

*Assistant Professor, Department of English*
*Mangayarkarasi College of Arts and Science for Women, Madurai*

## Abstract

*Chitra Banerjee Divakaruni is one of the most high-flying writer in Indian Literature, who is known for The Mistress of Spices. Tilo is the heroine, who provides the spices, not only for cooking but also for the personal problems of her customers. She knows the powers of the all the spices. Day by day she broke all the rules laid for her. The novel is filled with so many instances of magic elements primarily there are myths about various ancient spices. Secondly the spices are portrayed as to participate with in the dialogue with Tilo, thirdly the spices and characters change from one form to another and finally, the spices behave like a human beings, feeling possessed when Tilo falls in love. Here author gives the human feelings to the spices and it permits her to start a new life with her love. The characters of Divakurani's work cross the boundaries between dream and reality and question their own understanding of life and reason. The researcher is going to analyze that the spices respect the feelings of human beings is portrayed in this novel, The Mistress of Spices.*

***Keywords***: *myths, magic realism, postmodernism, stream of consciousness etc.*

Literature sees reality basically. Writing presents the quintessence of reality connecting together. With headway of the British Empire and the extension of English organization in India, Indians have been utilizing the English language for perusing, talking and composing. They began learning English since they thought it was valuable. Individuals thought about that English is a language of comprehension with a significant methods for correspondence among different individuals.

Magical Realism is a genre of narrative fiction in Literature, which expresses the realistic setting of real world with magical elements. "Magical Realism" is gotten from the term "Magischer Realismus" in 1925 by German workmanship pundit Franz Roh. "Magical Realism" focuses on the material object and normal things, which is exist in the real world. Italin writer, "Massimo Bontempelli", was one of the earliest writers to incorporate magical realism to his writings. The expression "Magical Realism" instead of "Magical Realism" initially arose in the 1955 article "Magical Realism in Spanish American Fiction" by pundit Angel Flores. Magical realism is consistently associated with Latin American Literature. After the Cuban Revolution of 1959, a significant number of the essayists were keen on

sublime realism, prompted the term magical realism being applied to another kind of writing known for matter-of-certainty depiction of magical occasions.

The significant topics picturized in progress of Chitra Banerjee Divakaruni are Magic Realism, Myth and Culture. She adequately draws out the topics through her characters in the novel. Through this Divakaruni attempts to draw out the issues of settlers who endure a great deal and at one mark of time, they become strong enough to confront any snags in their manner. Divakaruni has utilized dream as a method to extend the magical components in her books. She reestablishes the since quite a while ago failed to remember Indian legend, conviction, custom, Culture. Through the legendary references in her books it is apparent that she has a sound information in fantasy. As per Divakaruni, legend represents the ladylike existence where ladies salvage different ladies without anticipating support from men. She utilizes legend in her books not just as a hold to connect herself with India yet in addition reconsider forfeiting Indian ladies. Wizardry realism assists with advancing the thoughts of what is 'genuine' through creative mind as communicated in enchantment, fantasy and religion. Sorcery realism capacities Divakaruni to go up against the real world and attempts to unravel it, to find what is secretive in things, throughout everyday life and in human

demonstrations. Chitra Banerjee Divakaruni's first novel, The Mistresses of Spices (1997) is one of a kind; it is composed with a mix of exposition and verse, by utilizing Magic Realism. In the novel, the hero, Tilo gives flavors not exclusively to cooking yet in addition for the pining to go home and distance that the Indian migrants she would say. The Mistresses of Spices is the tale of Tilo, a young lady who is brought into the world in some other time, in a distant spot, who is prepared in the antiquated specialty of flavors and appointed as a courtesan accused of unique forces. She is brought into the world with extraordinary forces of anticipating future. She as far as possible goes to Oakland, California, where she opens a shop from which she manages flavors as curatives to her clients. The Mistress of Spices is a story of satisfaction, distress and one unique lady's magical forces. As a paramour of spices, Tilo ought not leave the store, she ought to never utilize the forces for herself however she should it use it just for other people, and the last and most significant thing which she ought to follow is she ought not connect with anybody. However, as the novel proceeds onward she begins to defy the prohibited norms laid for her.

Defies guidelines as well as permits herself to become hopelessly enamored with a desolate American. Divakaruni is composing the content of lady's insubordination to the strain to smother their longing and their bodies. The request for Mistress plainly

imitates male centric battled and Tilo should be made to break liberated from them. She battles with her own interests as she constructs passionate relationship with Native American man, whom she calls, Raven. She changes herself into a lady, feeling regretful about herself enjoy, however chooses to overcome the requital that she would need to confront.

Divakaruni bestows multiple consciousnesses as a sign between such dissent states. The process of self-perception is the underpinning of identity to the protagonist of the novel, named Tilotamma (Tilo) in The Mistress of Spices. Tilo wants to prove herself as a south Asian and American in this novel. Multiple consciousness helps her to expand her experiences and her succeeding relationship with her social and sexual identities.

The author obviously intimates her intention to carry, the readers to an identical world is clearly evident through the protagonist, who introduces herself as Tilo, named after the spice of nourishment "Til" –sesame seed.

The most important thing is that, the whole novel is divided into the 15 chapters and each chapter, is named after a spice. The spices are common, that are used for cooking in day to day life, like "Turmeric, Cinnamon, Fenugreek, Asafoetida, Fennal, Ginger, Peppercorn, Kalo Jire, Neem, Red chilli, Makaradwaj, Lotus Root, Sesame". The first and last chapters are named after the character- the first chapter is "Tilo"

and the last chapter in "Maya" The entire novel is all about, how the protagonist is transformed from "Nayan Tara" to "Bhagyavathi" to "Tilo" to "Maya". Here the spices take up a major role.

Tilo escapes from her home, she does not know the magical powers of the spices. In due course of time she is captured by the pirates. Finally, she becomes the queen of the pirates and now her name is Bhagyavati, which means one who brings good fortune. This is the one typical quality of Tilo, she always tries to modify the situation, however worse it may be to her own favour. She never gives up in her life. She runs away from the pirates and reaches an island which is destined for her. There, she meets the first mother, also known as the Old One, she is the one who teaches the magical powers of the spices to Tilo. One can see the transformation of Tilo from the beginning of the novel, and it continues still the very end. She is not satisfied and when in search of peace, she comes to an island. Where she is to become the Mistress of Spices under the detailed training of first mother.

The protagonist of the novel, is chosen by the Old One as her student. After becoming the student, the protagonist makes a request that she be addressed as Tilo. Til or sesame seed which restores health, hope and give a new lease of life to people suffering from several untreatable diseases. "First mother, I will be Tilottama, the essence of til, life- giver, restorer of health and

hope" (TMOS. 42). But the Old One also reminds that Tilo is the short form of Tilottama who was the most elegant of the dancers in lord Indira's court. Indira is regarded as the king of gods in Hinduism.

All the mistress has to complete their training, everyone has to go through the shampati fire and choose the country they want to go. Indian mythology, tells about "Shampati, bird of myth and memory who divided into conflagration and rose new from ash" (TMOS. 56). This is the major symbolic reference from mythology to as realism to the magical transformation. Tilo moved to America with the help of "Shampati Fire", is a giant bonfire into which she steps and disappears. The symbolism of fire is crystal clear in its action; the destruction of present physical form, and a reduction to ashes that are then scattered to the far corners of the globe. Divakaruni again indicates the process of Tilo's identity formation, using the fire as a metaphor for the recreation of the self and presenting identity as erratic rather than permanent. They transform into Old lady, if they take over the "Mistress – body". The Old One told that "you will not burn you will not feel pain. You will wake in your new body as though it has been yours forever" (TMOS.57)

The Old One, also known as the first mother teaches Tilo about the magical power of all the spices with the other girls. Those spices are later to be used to cure others diseases and troubles when it is given to them with the magical chants. Once she manages to learn all those special powers, she is to run the "SPICE BAZAAR" in Oakland, where Tilo sells the spices to covers the whole Indian community. She sees that a large number of people belonging to various sections of the society and different parts of India as well as other minorities. Tilo wants to acts as a bridge in the new environment, she is ready to fill the gap between these communities.

- Every spice have different powers that we do not think in our life time, for example,
- Turmeric for hearts sorrow, anointment for death, hope for rebirth (TMOS. 14)
- Chandan, powder of the sandalwood tree that relieves the pain of remembering
- (TMOS. 27)
- KaloJire, the protector against the evil eye (TMOS. 31)
- Chilli, fire-child, cleanser of evil. (TMOS. 37)
- Cinnamon, friend-maker (TMOS. 40)
- Fenugreek renders the body sweet again, ready for loving (TMOS. 47)
- Coriander seed, for clearing eye sight (TMOS. 70)
- Asafoetida, which is the antidote to love (TMOS. 74)
- Fennel cools the temper well (TMOS. 104)
- Peppercorn which has the ability to sweat your secrets out of you (TMOS. 149)

Likewise, each spice has a special day for it. For example,

- For Turmeric it is Sunday (TMOS. 14)
- Chilli, Spice of red Thursday (TMOS. 37)
- Fenugreek Tuesday's spice (TMOS. 47)
- Asafoetida Friday's spice (TMOS. 67)
- Peppercorn is the spice of Monday (TMOS. 147)
- Fennel, which is the spice for Wednesday (TMOS. 104)

There are sure codes of rules to be trailed by every one of the paramours which Tilo eventually breaks over the span of her change. For Tilo, breaking the rules is significant in order to define her identity. The mistress should never leave the store, she should never use the powers for herself but for others and last but not least she should not make any physical contact with any human being. These are the three main codes of rules laid down for being a mistress. There are smaller stories interwined in the novel, where Tilo uses her powers to help others. While helping others, she starts breaking the forbidden rules laid for Mistresses. Not only she breaks the rules but also she allows herself to fall in love with a lonely American, named Raven. Tilo always waits for him in the store fully engaged with his thoughts. Making love with Raven brings in a symbolic change making her more human rather than supernatural.

The clash between love and duty plays a major role in the novel. Tilo as a mistress is not free to fall in love. She is grabbed between two different worlds; duty as a mistress and her personal needs as a human being. The powerful emotion of love force her to act against her duty at various levels. Inspite of her personal conflict, she performs her duty as a mistress sincerely.

As a mistress, she is forbidden to love her own self, and to look attractive in order not to be loved by anyone. After mating with Raven, she does not follow the rules and transforms into a beautiful woman. The Mistress of Spices is a good example of post-modernist writing. Divakaruni uses nonlinear narration, jumping one place to another sometimes confuse the readers. The constant shifts also bring forth the idea that one's mind cannot be linear all the time. The second important thing is that, the magical realism elements in the novel like, Tilo hearing the voices of the spices and knowing their origins, friendship with snakes attract the readers. She is able to converse with the spices. The spices play a major role in the novel. The Old One or the first mother is a mythical character. Hyper reality is another prominent technique used in the novel. Folklore myth and legends are essential elements of magical realism and The Mistress of Spices is embedded with these.

## Works Cited

1. Divakaruni, Chitra Banerjee. The Mistress of Spices. Macmillan, 2014. Print
2. Rajkumar, G., and G. Neeraja. "SPICES REVENGE: A MAGICAL REALISM IN CHITRA BANERJEE DIVAKARUNI'S THE MISTRESS OF SPICES." International Journal of Multidisciplinary Researches: 12.
3. https://ijellh.com/OJS/index.php/ OJS/article/download/801/801/85 28

# THE MISTRESS OF SPICES: A WOMAN'S DISTACTION FROM HER DUTY AND DETERMINATION TOWARDS HER TRADITION AND CULTURE

**M. SANGEETHA BALA SANKARI**
*Assistant Professor of English*
*Prince Shri Venkateshwara Arts and Science College, Chennai*

**G. RAJKUMAR**
*Assistant Professor of English*
*Annai Fathima College of Arts and Science, Madurai*

Tilo is the main character in the '*The Mistress of Spices*' who born in India and moved to Oakland, United States. She is a dedicative woman towards the spices and spent her entire life dedicated to rules and regulations until she fell in love with young handsome Doug. As a mistress she never failed in her duty. She might have wandered and confused because of her love towards him as she is not used to that kind of relationship. She broke many rules but she never left her tradition behind her. As stubborn as mule she needed both and held on to them till the end and for that she sacrificed herself to the fire.

Paul Mayeda Berges who is an American director exquisitely portrayed the culture and tradition of Indian people with the help of his wife, Gurinder Chadha who scripted the movie based on the novel 'The Mistres of the spices' by Chitra Banerjee Divakaruni who received many awards for her works.

Divakaruni's works has been published in over 50 magazines. Her second fiction "*The Mistress of Spices*" which was written in 1997 long listed for The Orange prize. A critic gave review about this movie:

**"For those who love spices and Asian tradition culture"**

She reflects herself in the novel about her immigrant experience by the character Tilo who born in India and move to Oakland, United States and opens a spices shop, how she understood both the culture and sometimes how it tempts people to bend or break the rules when they get to adopt in an alien country.

In one of her interviews which she was given to 'The Sunday Statesman', dated, 2 February 2003 she confessed:

**"I have to live with a hybrid identity. In many ways I'm an Indian, but living in America for 19 years has taught me many things. It has helped me look at both cultures more clearly. It has**

**taught me to observe, question, explore and evaluate".**

As a diasporic writer, she reflects an alien country's tradition. Mayeda Berges would not be able to reveal the soul touching dedication to the tradition of Indian culture unless he knows the importance of Indian culture.

Every dedicative work has its own rules. *The Mistress of Spices* must followed such rules. Tilo had to follow:

**"You must help her clients to accomplish their desires with spices, but never hers; never leave the store; and never touch other's"**

Rules are hard. Rules are meant to never to break it. Tilo remained veracious in her duty until she fell in love with a handsome American Architecture. Love is an inevitable need and want of human life. Even a staunch person's mind would waver at a point of time for love.

For more than 20 years now, Chitra Banerjee Divakaruna has been telling stories of Indian women form her home in California. Her women are desperate, wonderful, complicated, lyrical, memorable and even magical in '*The Mistress of Spices*'. Tilo was strong and fought her way back to living even while she was young when kidnapped by the strangers. The same girl spellbound and was not strong enough to break the love when she was a teenage girl.

Tilo began to break all the rules one by one until the spices abandoned her.

Chillies as a protector warned her many times. Still she wanted to go blindly behind her love. Even though she did not listen to them, she never ignored their warnings. She just kept fighting for her love. Though Berges is an American he expressed beautifully. The hesitation of Tilo while she was breaking the rules, as it took everything to that while she was breaking the rules to get what she want.

Tilo was blinded by love and failed to protect Haroun who trusted her and protected her like his own sister when he saw her encounter with Doug. Like a psysic she saw what will happen to Haroun and still she did not safeguard him before it happened.

She did not wander for a companion to save herself from her lonliness. She has many customers who came to her shop. She cared for Haroun as his regular and loyal customer. But what she felt towards Dough was unstoppable. When he touched her first time she was able to drew her hand from him. But later as her love grew it was irresistible for her to stay away from him.

When she broke the rule by let him touch, the spices got angry and started to punish her. It reflects on her customer and still she went ahead and broke another rule by leaving her store. She could have waited until Haroun come looking for her or could have asked Doug or anyone's help to deliver the spices which will be able to protect Haroun from evil. But she wanted to go with him and thereby another rule was

broken. She still could not protect him beforehand. If she came out of the store only to help Haroun she should have returned back to her store when she found his house was locked. She made a reason to go a day out with Doug. But it does not mean she did not care for Haroun.

Bad things begin to happen to her after she failed to abide by her rules. Her store was being theft. Her spices were destroyed and the spices did not serve the purpose for her purpose for her customers. So they began to return her spices to her. Worms appeared in her spices and that indicates a bad omen. Everything around her went wrong. Suddenly the First mother appeared and warned:

**"Tilo daughter you have gone too far. This will destroy you and everything you are. You must return now to where you belong. You are in danger. You have broken too many rules".**

When Tilo answers back that she was to live by different rules in that alien country, the first mother depicts the significance of her tradition and retorted that she is nothing without the spices and makes her understood the spices are her tradition. Even though she was corrupted by the alien country, she still hold on to the spices and never let them go.

**"To err is human".**

She failed in her duty and gone behind her desires and used spices for her own desire. Every human being tends to commit mistakes. Once she was high the first mother warned her:

**"You are nothing without the spices. The spices are your tradition. Do not let America seduce you. With the dreams of love, you have aroused the spice's hate. Chaos will come. If the mistress fails in her duty, fire is the end. The spices will decide".**

She could have lived with Doug but she understood that she is nothing without the spices. So she decided to go where she belongs and ready to accept the punishments for what she had done. The human mind wanted to get what its want and she stayed with Doug for a night, fulfilled her desire and returned to her duty.

Tilo was blessed by birth with these supernatural powers to help others. She was born different from others. So she lost normal human independent by living an ordinary human life. She must not leave her store and not allowed to have an usual family life which is the price she had pay to live with her supernatural powers. One have to lose something in order to gain something. That is how the world works.

**"For everything you have missed, you have gained something else, and for everything you gain, you lose something else.**
**(Ralph Waldo Emerson)**

Oil and water cannot be mixed together as one. She could have either lived with the spices or with Doug. But she wanted both and ready to lose

herself for the things she loved and as a post-modernist she thought of living with both Doug and the spices. Initially it did not work out the way she wanted. But eventually she made it work by proved her dedication in both she wanted to possess. Never giving up is the basic quality of dedication. The real dedication lies when they did commit mistakes and coming back still not giving up. She never gave up because she knew that she could not just live Dough without thinking about the spices.

> **"Never give up on something that you can't go a day without thinking about."**
> **(Winston Churchill)**

She might have gone too far but she returned to where she belongs after she got what she want. Some things are a part of human life. No one could avoid those from happenings. She was at that point where everything in her life almost destroyed. As a young female she was corrupted by the alien city which knows nothing about her rules and tradition. But she returned to her conscious and gives herself up to the spices leaving her desires behind her. This is where her dedication lies. This is when she proved that she is *The Mistress of Spices*.

Sometimes breaking the rules does not mean that she is not fit for it instead she proved it in a way that she is really in to it. The situation of desperation in wanting something or could not live without it would lead people to do anything. Tilo loved the spices so much that she sacrificed herself to the fire.

The fire did not burn her. Spices accepted her. She not just loved the spices but worshipped them. The spices knew she would never leave them. Instead of the rules she broken, she proved herself. Sometimes by breaking the rules one could not decide whether they failed in their duty or not. As a human she was being selfish towards her needs. This is common among the people. The punishment given by the spices to her is a testing of her dedication towards them. The spices knew her well. The fire spared her to show that she is the *The Mistress of Spices*.

## Works cited

1. Divakaruni, Chitra Banerjee. *The Mistress of Spices*.Macmillan, 2014.
2. https://en.m.wikipedia.org/wiki/Paul_Mayeda_Berges
3. https://en.m.wikipedia.org/wiki/Chitra_Banerjee_Divakaruni
4. https://www.google.co.in/search?q=never+give+up+winston+churchill+quote&rlz=1C1CHBD_enIN786IN786&source=lnms&tbm=isch&sa=X&ved=0ahUKEwi89rnF2IXcAhXEL48KHc5kCkAQ_AUICigB&biw=1366&bih=672#imgrc=fHc9gVGwzDLddM:
5. https://www.google.co.in/search?q=lose+something+to+gain+something+ralph+waldo+emerson&rlz=1C1CHBD_enIN786IN786&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjvtsf_2IXcAhXLqI8KHZMBBzMQ_AUICigB&biw=1366&bih=672#imgrc=B6LJx5JB1XOIVM

# SPACIAL AND TEMPORAL ELEMENTS AS A MEANS OF CONSTRUCTING ALTERNATE REALITIES IN THE DYSTOPIAN NOVELS *1984* AND *THE MEMORY POLICE*

**JASNA JALAL**

*Research Scholar, Post Graduate and Research Department of English*
*T. K. M. College of Arts and Science, Kollam, Kerala*

**Dr. R. DEEPA**

*Research Supervisor & Assistant Professor of English*
*Milad-E-Sherif Memorial College, Kayamkulam, Kerala*

## Abstract

*Dystopian fiction, also known as anti-utopian novel, depicts an unpleasant, bleak image of a future world controlled by totalitarian regimes and its earliest traces can be tracked back to Aldous Huxley's Brave New World (1932). Spacio-temporal aspects form an essential element in such fictions and George Orwell's 1984 (1949) as well as Yoko Ogawa's The Memory Police (1994) are typical examples of dystopian fiction where space and time are inseparable components. This paper attempts to examine the notion of space and time dealt in both these novels based upon the concepts of heterotopia and heterochrony as proposed by the French theorist Michel Foucault to understand its multiple meanings and the way spacio-temporal elements operate as a means to construct realms of alternate realities.*

***Keywords:** dystopia, space, time, reality, memory, heterotopia, heterochrony*

## Introduction

Space and time are two aspects commonly perceived as complementary components that forms part of all the dimensions of empirical existence. As part of literary narrative, the former refers the domains of settings and surroundings of events, characters and objects while the latter indicates the aspects of past, present and future in association with the notion of time. According to Michel Foucault, space always functions in relation to experience of time. In his 1967 lecture titled *Des Spaces Autres* and translated as "Of Other Spaces", Foucault proposes his theoretical concepts heterotopia, akin to spaces and heterochrony to time.

## Foucault's Concept of Heterotopia and Heterochrony

Michel Foucault regards heterotopia as places that exist as 'counter-sites' which simultaneously represent, contest and invert all other conventional sites. They represent a juxta positional, relational space that indicates incompatibility, isolation and paradoxes. In fact, they are world-within-world which mirrors and distinguishes themselves from the outside world. Foucault argues that heterotopic spaces exist in separation of

what is usually perceived as open and freely accessible spaces. Such spaces, according to him, are often entered by individuals either through compulsory means or forceful factors as well as for the purpose of ritual purification or hygienic cleansing.

Foucault also defines two types of heterotopias. First type is heterotopia of crisis, spaces that are privileged or forbidden places reserved for individuals who are in a state of crisis mostly in relation to society such as adolescents, menstruating women, pregnant women and elderly people. Second type is heterotopia of deviance, spaces where individuals whose actions deviate from the societal norms are spatially isolated and inhabited such as prison, asylums, rest homes, clinics and cemetery.

Heterotopias, in fact, are spaces or places that have multiple layers of meanings. They also serve as a means of escape from authoritarianism and oppression thereby generating an isolated space that ensures the construction of an alternate reality or alternate world which exist in parallel to the ultimate reality or ultimate world. Thus heterotopias are also spaces for affirming the difference where opposites or contradictions converge. Foucault suggests two ways by which heterotopias function. Heterotopia of illusion creates a space of illusion that exposes every real space and enables the individuals to create new illusions or utopias that one cannot have. Heterotopia of

compensation, on the other hand, creates real spaces in opposition to dominant spaces. That is, a space that is the 'other' is generated which exist in parallel to the dominant space contradicting it.

Foucault says, heterotopias are linked to heterochronies or "slices in time" which refers time as a social and political construction. He regards archives, libraries and museums as heterotopias that function as a mechanism for preserving time from past for constructing future. The intersection of space and time enables to reach a point free from the normative experiences of both by generating a newer version of them that serves as a mode of transgression.

## Spacio-temporal aspects in George Orwell's *1984* and Yoko Ogawa's *The Memory Police*

George Orwell's novel *1984,*set in Oceania, discusses various spatial terrains beginning from the protagonist Winston Smith's apartment which is the inner space of the Victoria Mansions specifically designed and allocated for the Outer Party members. The space is dingy, battered and leaking with the disgusting smell of boiled cabbage and rag mats indicating the political insignificance of citizens as the dwelling spaces of Inner Party members like O'Brien are spacious, well-fashioned and well-equipped with servants in uniform to assist. All spaces are subject to surveillance by the tele screen and the colouredposterers of Big

Brother pasted on walls affirm the fact that a pair of eyes is always observing everything. All spaces are regulated and controlled by the dictum "BIG BROTHER IS WATCHING YOU" (*1984* 3).

Winston Smith's act of renting the room above Mr. Charrigton's junk shop marks his revolt and it emerges as space of resistance or heterotopia of compensation as Foucault has proposed as it marks the generation of 'other' space in opposition to the ideological one propounded by the party. Julia's arrival to the space of the rented room with prohibited goods such as real coffee powder, sugar and other eatable things like white bread, jam, milk along with perfume and make-up materials reveal her yearning to create a private space of identity and freedom. Both of them envision an alternate real world devoid of restrictions and attempt to regenerate a new space where normal life existence is possible.

Time is also a significant motive used by George Orwell to indicate the creation of an alternate reality and this happens through Winston Smith's act of writing diary. It is used as a way of protest against the regulation, control and documentation of time by the ruling authority. He regards it as a means to "communicate with the future"(*1984* 9) and his nostalgia for the past time prompts him to reconstruct the past in the present time. Winston attempts to retrieve past from the memory of an old man he meets in the street but ends futile

making him realise the old man's memory as nothing but a rubbish heap of broken images.

The glass paperweight which Winston discovers in Mr. Charrigton's junk shop is another relevant marker of time in the novel and it signifies heterochrony in relation to alternate reality. Winston fascinates the coral trapped in the paperweight as reminiscent of past and attempts to preserve it in the present. The old-fashioned furniture and appliances in the rented room also transposes him to past and awakens in him "a sort of ancestral memory" (*1984* 95). Winston's hope for constructing an alternate real world in future is reflected in his dream of O'Brien where he says, "We shall meet in the place where there is no darkness" (*1984* 101). He visualizes the future real world as devoid of hardships and torture desiring to possess everything prohibited in the present. But his vision of a pleasant future is sealed and altered by his experience in the high-ceilinged windowless cell in the Ministry of Love.

The hidden room or the secret room in Yoko Ogawa's *The Memory Police* also operates as a heterotopic alternate space where the remnants of past are preserved as tokens for constructing an 'other' world. The narrator chooses the room in her house to hide the editor of her novel named R so as to prevent the Memory Police from taking him away due to his unusual capacity to retain memories of past time. The heterochronic nature of his memory

compels him to seek refuge in a heterotopic space. An alternate real world is constructed in the secret room with equipments and installations such as fan, running water, toilet and a sound proof system that ensures his safety and prevents interference from the outer world. Ogawa writes,

The room was ideally suited to playing the harmonica. There were
no noises from outside to disturb us, no telephone ringing, no one
to come calling, and the sound spread to every corner. We could shut ourselves in for as long as we liked…" (*The Memory Police* 216).

Later the hidden room emerges as a space of eternity when R says,

Even if the whole island disappears, this room will still be here….
Don't we have all the memories preserved here in this room?.
This is the very bottom of mind's swamp, the place where
memories come to rest (*The Memory Police* 232).

The Memory Police decodes the genome of people who are capable of retaining their memories of past and eliminates such people from the island which is the setting of the novel. Things disappear from the island and a few of them includes roses, fruits, harmonica, ribbon, perfume, stamp, bell, maps and ferry. The disappearance of photographs from the island marks a profound influence over memory and time duo to its inseparable relation with the past. R says, "Memory doesn't

change just pile up-they also change over time. And sometimes they fade of their own accord"(*The Memory Police* 81). The disappearance of calendars also erases a marker of time from the lives of islanders.

The inner space of statutes made by the narrator's mother also acts as heterotopic spaces for storing the icons of past. It is the place where everything disappeared from the island is kept thus making it the spaces of compensation to retain everything lost. It brings together different objects from distinct times to a single spacial and temporal realm and represents a totality that preserves infinite time in an infinite space. Other heterotopic spaces discussed by Ogawa in the novel includes library, bird observatory and boat. Library, as Foucault has suggested, is the place where heterotopia and heterochrony converges to generate an alternate reality. The bride observatory, though birds have disappeared from the island, stands as a memorial of past and both the library and the bird observatory symbolises the accumulation of past into spaces devoid of time. According to Foucault, boat is a floating piece of space, a place without a place, that exist by itself, and functions according to its own rules in the space between ports, between cultures and between stable points. The boat in which the old man lives in *The Memory Police* is an isolated place of his existence that exist in parallel to the outer world inhabited by others and it

is independent of external forces and pressures.

## Conclusion

The idea of humanism, since its perception from fifteenth century onwards, emphasises on human beings and the notions of freedom, dignity and progress that affirm an equal position for everyone both individually and socially. The totalitarian regimes depicted in the dystopian novels *1984* and *The Memory Police* pose a threat to the humanistic perspective envisioned and curtail the liberties of individuals. Foucault's concepts of heterotopia and heterochrony suggest the formation of alternate spaces in relation to space and time to resist such systems and reinstate the denied liberties. George Orwelland Yoko Ogawaemploys Foucault's both ideas in understanding spacio-temporal aspects that generate an alternate reality that resembles utopia where everything is ideal and perfect. Both these ideas question the conventional notion of space and time to generate multiple meanings. In both the novels, the protagonists engage in the process of writing which is used as a means of preserving the present reality in the form of words for structuring a better future thus attempting to affirm space and time as intransient and eternal. Memory functions as a significant tool in structuring time and transposing reality.

## References

1. Foucault, Michel. "Of Other Spaces." Translated by Jay Miskowiec, *Diacritics,* vol. 16, no. 1, 1986, pp. 22-27. *JSTOR*, http://www.jstor.org/stable/464648.
2. Ogawa, Yoko. *The SMemory Police.* Translated by Stephen Synder, Harvill Secker, 2019.
3. Orwell, George. *1984.* Signet Classic, 1949.
4. Rainbow, Paul, editor. *The Foucault Reader.* Pantheon Books, 1984.
5. Ronen, Ruth. "Space in Fiction." *Poetics Today*, vol. 7, no. 3, 1986, pp. 421-438. *JSTOR*, http://www.jstor.org/stable/1772504.
6. Zoran, Gabriel. "Towards a Theory of Space in Narratives." *Poetics Today,* vol. 5, no. 2, 1984, pp. 309-335. *JSTOR,http://www.jstor.org/stable/1771935.*

# MENSTRUAL TABOOS AND THE NEED FOR A CONSTRUCTIVE DISCUSSION

**VISHAKHAPATIL**

*Assistant Professor*
*The K.E.T's V.G. Vaze College of Arts, Science and Commerce (Autonomous)*

## Abstract

*In the 21st century, women and women's issues have been discussed to a great extent. Women were subjected to discrimination in various areas. Over the years, women in all societies have been denied the basic political, social as well as economic rights. The cultures practices prevalent in various societies led to the further deprivation and subjugation of women. One of the issues on which the society did not talk freely for a number of years was menstruation. All women in the reproductive age have to undergo menses. It is a biological and natural phenomenon that occurs. Menstruation is even today viewed as being a taboo and thus certain practices evolved over time which further led to the oppression of women. Women are not educated in the right direction about menstruation and thus they too end up believing and following the socio-cultural taboos set by the society in general. The research paper is an attempt to comprehend the various taboos associated with menstruation particularly in India. The data collected comprise of the secondary methods like Online referencing, Journals, Articles, Magazines, Books, Government Websites, Videos etc. Qualitative analysis of data has been conducted to arrive at conclusions and further suggest recommendations.*

***Keywords:*** *menstruation, menstrual taboos, attitude, health, puberty, menses.*

## Introduction

From the ancient times, women have been suppressed, discriminated and not paid attention to. There are various problems women face when it comes to their choices, liberties and freedom in every aspect of social and political life. The 20thand the 21st century have seen many such events where the obstacles women face are openly talked about. However, certain issues are not discussed in the public domain. Menstruationis one such phenomenon that every woman experiences which till last decade was not even openly discussed and talked about. In fact menstruation was and is still viewed as an illness, curse and a bad phase in women's life. The present decade has seen various changes and in some parts of the world as there have been debates on it. The issue of the menstrual hygiene products and prevalent myths and taboos stands important. They impose restrictions on women during her periods such as not entering any place of religious worship etc. (Houppert, 2000). The limitations of the

paperis that it does not take into consideration all the practices related to menstruation throughput India. Moreover, the study does not focus on a particular period and particular cultures.

## Literature Survey

The feminist perspective on menstruation deals with how periods are viewed as an illness in today's world. The issue of women's health from menarche to menopause is examined. It deals with the psychological, hormonal and physical changes that occur in a women and the way it impacts them. This feminist view tries to understand the problems associated with women during their menses. (Golub, 1985). It is significant to analyze the historical and the present discourses that prevail about menstruation in different cultures and societies. Moreover it becomes important to discuss various other things related to the issue of menstruation right from the usage of sanitary pads to tampons and other menstrual hygiene products, providing us detailed information about its advantages and disadvantages. Also we need to examine the myths, superstitions that prevail in the society. (Delaney, 1988).

## Research Problem

The paper aims to analyze the various beliefs, myths and taboos associated with menstruating women particularly in India.

## Discussion

Menstrual taboos restrict the growth of women to a larger extent, what is more surprising is the fact that menstrual taboos are not only pertinent in the rural areas but are also prevalent in some pockets of the urban domain and here we need to think about the process of development as well and take into account that development which inculcates the psychological progress of the people. (Garg,2015).Moreover, for every girl it is important to know about menstruation before attaining periods as it would provide the girl with basic information and would not panic in the situation. Also, the main sources of transmitting such information are the mothers in the first place followed by the school. Thus, it becomes crucial that mothers and schools are both educated about the need to discuss the issue of menstruation with the adolescent girls in an open manner. (Ramachandra, 2016). There are various myths, taboos associated with the same in our society. Many women are not able to develop themselves and step out of the four walls of the house during their menstruation. In every sphere of social life be it family, or any other social institution a menstruating women is considered impure and is socially boycotted during that phase. Judy Grahn also provides rich interpretations of ancient menstrual rites and evolves a relationship between body, mind, soul and spirit and tries to portray the true meaning of women's menstrual power. Since ages different

people have talked about menstruation from different perspectives. In many cultures, menstruation is considered to be private and is largely viewed as a hidden process that is not supposed to be discussed publicly. Moreover, women also refrain from speaking about this issue in the public domain and in the 19thCentury there was no discussion on this issue and so this area remains unexplored. For instance, menstruation was rarely mentioned in women's diaries and correspondence, which prove to be the main documented sources on women's lives. The silence of the issue also remains predominant in the modern lives. (Wilkinson, 1995) states that the survey conducted by Kathryne Lovering, concluded that adolescents generally refrain from speaking about the issue and feel shy of it. The only discourses on which women are able to speak are the medical ones, wherein problems like pain, distress are discussed. Unless the adolescent girl's faces distress in having a sanitary towel or suffer from excessive pain they do not attempt to talk aboutit.

The silence about menstrual experiences has been broken recently by many feminist in order to describe their state of horror and confusion that they experienced during their first periods. For example, Simone De Beauvoir, describes her first period as:

> "We were staying with friends in the stifling heat of mid- July, I woke horror stricken one morning, I had spoiled my nightdress, I washed it and got dressed; again I soiled my underclothes, I had forgotten Madeleine's vague prophecies, and I wondered what shameful malady I was suffering from"(Beauvoir, 1963)

The 1970's also saw other discourses in on menstruation when, the feminist tried to revive the issue and asked women to share their experiences. For instance, some women described it as 'pain in the vagina' while some asserted that 'It makes me aware of the fact that I am a women', while others said that 'it makes them feel cleaned from the inside'. (Weideger, 1976). Thus, it should be understood that the sensation of menstruation i.e. its look, smell, feel and its emotional interpretations may vary from women to women and also from period to period. However, even in the 21stcentury where a lot of women try to assert their rights, choices and freedoms there are many who still stand discriminated and suffer under an invisible veil due to the societal restrictions that prevail on her. One such area where women's freedom is curtailed is surely that of menstruation wherein women has to still follow the various rules, regulations and norms set for her. Most of these restrictions assume the form of prohibitions like unable to enter the kitchen, cook, refrained from visiting places of religious worship, and also asking a women to live separately at this part of the month.

In many societies, it is believed that menstrual blood is dangerous, especially to men and the religious,

domestic and sexual taboos that are in existence are to ward off its mystical powers. For instance, in primitive Arapesh society of New Guinea, the newly menstruating girl is isolated from the community in a cave, cage or hole in the earth, dark hut or other places that appears to be like the womb. As this fear increases taboo restrictions become more elaborate. (Kaundal M. &., 2014).

Till many years, menstruating women were not allowed to stay in their houses and were sent outside the villages, some studies also reveal that women were not allowed to bathe or comb their hair. (Apffel, 1994).When given a serious thought to this, it indicates women initially did not have access to water during menstruation leading to more mental and physical problems in the long run. Moreover, it was also found out that in some cases provision for separate utensils were also made for the menstruating women and of course they were not allowed to enter the kitchen. In all most all the religions women are refrained from offering prayers or participating in religious ceremonies, and going to the religious places like temples, mosques, touching other people etc. (Bilal Philips, 2012). Menstrual taboos harms a women's health to a considerable extent.

## Recommendations

Education and awareness that aim at confronting women to curb menstrual taboos should be undertaken. It will make them understand what menstrual taboos are and the need to curb themwhichwillenhancetheirdevelopment.Trainingneedstobeaccordedtoaccreditedsocialhealth activists, and Anganwadi workers to mobilize the support against menstruation related myths in the country. We also should try to increase the role of the male counterpart in clearing the beliefs and deep rooted social system. In schools, the special seminars that are organized should not be restricted to girls but should also inculcate boys. It will help in decreasing the stigma associated with menstruation and bring the issue in the public domain thus making it normal. Thus, there is a need for multi-disciplinary approaches to tackle the taboos associated with menstruation and also to increase menstrual hygiene in the country which now stands in a pitiful situation. Such initiatives should be undertaken immediately to make India a menstrual hygienic country and a country with no menstrual taboos.

Apart from dealing with menstrual taboos, a strategic approach should be followed to increase the usage of menstrual products. Firstly, awareness regarding menstrual health must be raised in all parts of the country through the efforts of the Governmental and Non-Governmental institutions. Community based health education campaigns may also prove to be fruitful. Training programs should be conducted in schools that will cater to a mass audience. Special attention should be given to educate women as it

will help to empower them and increase their say in the decision making process in the society. Understanding their health status will become much easier. Adolescent Friendly Health Service Clinics should be set up and engage in dealing with the obstacles women face during menstruation. The local medical college can hold demonstrations on the same. Moreover, in schools the syllabus should be redesigned to include the issue in detail and information should be transmitted through short films, animated videos that will make students learn about the same in an interesting manner.

Next, provisions should be made for low cost sanitary napkins which should then be distributed in slums and rural areas, sanitation and washing should be an area that needs to be addressed immediately. Community health centers must also be set up in the slums to educate women. The need for maintaining an overall hygiene should be popularized and there should be cleanliness drives. Installation of waste bins and garbage collecting vehicles should function both in slums and rural areas. Construction of both public and individual toilets should be paid heed to as it will increase menstrual infrastructure in the country. In both rural and slum areas, the government can engage with the local governments to create small scale industries that could manufacture cost effective sanitary pads which will serve dual purpose of menstrual hygiene and employment creation.

## Conclusion

Thus, there is a need to holistically view the taboos related to menstruation all over the world. Moreover, be it any society it is imperative to adopt a collective approach to curb the taboos and educate women about menstruation. A combination of factors like spreading awareness through community driven programs to curb menstrual taboos is essential. Moreover, there is an urgent need to understand that any taboos and discrimination during menstruation will have adverse effects on the physical and psychological health of a women. So, women in schools, colleges should be educated about menstrual hygiene and the need to maintain the same. Government should freely distribute sanitary napkins, menstrual cups etc. in remote areas. This will help curb the infection that women have to face because of improper menstrual hygiene.

Thus, it is only through the cumulative efforts of government and the society in general that the taboos associated with menstruation can be curbed.

## References

1. Apffel, F. M. (1994). *The Sacred Groves.* Manushi (84), 22-32.
2. Beauvoir, S. D. (1963). *La force des choses I.* Paris: Gallimard Education.
3. Bilal Philips, D. A. (2012).*Islamic Rules on Menstruation and Post Natal Bleeding.* International Islamic Publication House.

4. Crawley, E. (1902). *The Mystic Rose: A Study of Primitive Marriage.* London: Macmillan.

5. Delaney, J., Jane, M. L., &Toth, E. (1988). The Curse: A Cultural History of Menstruation.

6. Illinois: University of Illinois Press; .

7. Garg, S., & Anand, T. (2015). Menstruation related Myths in India: Strategies for Combating it.

8. Journal of Family Medicine and Primary Care, 4(2), 184-186.( https://goo.gl/wG4gq7 )

9. Golub, S. (1985). Lifting the Curse of Menstruation (1st Edition ed.). Routledge.

10. Golub, S. (1992) *Periods: From Menarche to Menopause.* California. Sage Publications Jong, E. (1973).*Fear of Flying.* New York: Henry Holt and Company.

11. Houppert, K. (2000). The Curse: Confronting the Last Unmentionable Taboo: Menstruation. New York: Farrar, Straus and Giroux.

12. Kaundal, M., & Thakur, B. (2014).A Dialogue on Menstrual Taboo. Indian Journal of Community Health, 26 (2), 192-195.

13. Muraleedharan, A. (2014, June 25). *Ambubasi: When Mother Earth Menstruates!* Retrieved March 19, 2018, from The Speaking Tree: https://www.speakingtree.in/alls lides/ambubasi-when-mother-earth-menstruates

14. Penelope, S. (1986). *The Wise Wound: Menstruation and Everywoman.* Paladin Books Saucer, M. M. (2015).*Gender in Medieval Cultures.* London: Bloomsbury.

15. Ramachandra, K., Gilyaru, S., Eregowda, A., & Yathiraja, S. (Eds.). (2016). A study on knowledge and practices regarding menstrual hygiene among urban adolescent girls,International Journal of Contemporary Pediatrics, III (1), 142-145. (https://goo.gl/HjpX2p)

16. Rose, G. (2012, December 28). The Taboo of Menstruation., The New York Times.(https://goo.gl/xQ4Hbr)

17. Subhash B. Thakre, S. S. (2011). Menstrual Hygiene: Knowledge and Practice among Adolescent School Girls of Saoner, Nagpur District. Journal of Clinical and Diagnostic Research, V (5), 1027 - 1033.

18. Walker, A. E. (1997). *The Menstrual Cycle: Women and Psychology* (Illustrated ed.). New York: Routledge.

19. Weideger P. (1976). *Menstruation and Menopause: The Physiology and Psychology, The Myth and Reality.* New York. Knopf Publishers, Random House.

20. Wilkinson, S., &Kitzinger, C. (1995).*Feminism and Discourse: The Bleeding Body: Adolescents talk about Menstruation.* (K. L. Matthews, Ed.) London: Sage Publications.

# SURVIVAL OF DUAL IDENTITY AND WISH FULFILLMENT: A MIND SHIFT TO THE ACT OF JUSTIFICATION OF ASTAFY IVANOVITCH IN DOSTOEVSKY'S "AN HONEST THIEF"

**M. SANGEETHA BALA SANKARI**

*Assistant Professor of English*
*Prince Shri Venkateshwara Arts and Science College, Chennai*

**Abstract**

*"Survival of the fittest" is a phrase originated from Darwinian evolutionary theory to describe the mechanical way of any living being in this world to live or to exist at any cost. The Survival would push us to commit things which we think are incapable of or despised deep below or will be despised even right after committing it. Fyodor Mikhailovich Dostoevsky is a Russian Novelist, Philosopher, Short story writer and Essayist. Dostoevsky's three characters in this short story prove the need of one another which is also the main aspect of the survival. Dostoevsky describes the monkey mind of human through that honest thief. And in order to fulfill his survival he earned the name "honest" when he was not. The guilty made him took another identity to keep on surviving. Astafy earned a good name when he was dead and he took the old man identity, justified his act by giving the name "honest" though it was not an act of honest.*

**Keywords**: *survival, hidden identity, fulfillment, monkey mind, justification.*

"Survival of the fittest" is a phrase originated from Darwinian evolutionary theory to describe the mechanical way of any living being in this world to live or to exist at any cost. The Survival would push us to commit things which we think are incapable of or despised deep below or will be despised even right after committing it. Fulfilling our wish while we exist adds extra spices to the desire to our existence. It makes us either honest or dishonest according to the situation of the existence. Wish fulfillment acts as a fuel for the desire of the existence.

*"We cannot walk alone. And as we walk, we must make the pledge that we shall always march ahead. We cannot turn back.*

**-I have a Dream, Martin Luther King.Jr**

*"This survival of the fittest, which I have here sought to express in mechanical terms, is that which Mr. Darwin has called 'natural selection', or the preservation of favoured races in the struggle of life."*
**-Herbert Spenser Principles of Biology**

Fyodor Mikhailovich Dostoevsky is a Russian Novelist, Philosopher, Short story writer and Essayist. His works mostly explores the themes of religion and troubled psychology of humans. His Notes from Underground (1864) is considered by many to be one of the first existentialist novels. His Crime and Punishment (1866), Demons (1872) and The Brothers Karamazov (1880) are some of the most influential philosophical works.

In order to live in the long run, one needs a support and that support could be of any kind. Dostoevsky's three characters in this short story prove the need of one another which is also the main aspect of the survival. Agrafena, a maid usually do not talk much, is in need of money and brings a lodger who is ready to fulfill her needs, to her Master. EmelyanIlyitch did not wish to anger Agrafena. She is his housekeeper and he is not under any obligation to agree to her but somehow she is his better choice to his peace of mind and he depends on her every day. Plus he could also use the story-teller as a treasure to boredom of his existence. So he agrees to her eventually. Astafy who could not find anything better, agrees to be in that place.

"*But if anything like a notion or a project was by some means put into her feeble brain, to prevent its being carried out meant, for a time, her moral assassination. And so, as I cared more for my peace of mind*

*than for anything else, I consented forthwith.*"

**-An Honest Thief (2)**

Monkey mind is a Buddhist term which is also adopted by Taoism denotes the constantly unsettling mind of humans. Here, Dostoevsky describes the monkey mind of human through that honest thief. He was dishonest when the person who gave shelter to him asked about the missing breeches. He chose to be honest when the situation changes, when he was about to die, when he feel like there was nothing more to him, he chose to be honest. The honesty or dishonesty of a person was decided by the situation and how much the honesty will be useful to that person according to the situation.

The mind shift occurs to Astafy's another identity Emelyanoushka when he was in his death bed. Though it is not honest, Astafy claims Emelyanoushka as an honest man hiding his dual identity for his survival. It did strike him that was wrong but could not bring himself to confess the truth, fearing the worst might happen. But when he confessed he was aware of his situation and made himself sure that he would not be blamed instead he will be seen as an honest man in front of others. This shows the fulfillment of his survival and his identity will be remembered as honest though he was a thief.

"*Those riding breeches ----------- it was -------- sort of ----------- I who took them AstafyIvanovtich*"

*"Well, God forgive you, Emelyanoushka," said I, "you poor, sorrowful creature. Depart in peace."*

**-An Honest Thief (13)**

## Reference

1. Dostoevsky, Fyodor. An Honest Thief: Short story, Read Books Ltd, 2018. Print.

# TREND ANALYSIS AND PREDICTION OF INDIAN STOCK MARKETUSING MARKOV CHAIN MODEL

**Dr. RAJKUMARISONI**

*Assistant Professor, Department of Accounting and Financial Management*
*Faculty of Commerce, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat*

**SHRI. BHUMIT SHAH**

*Assistant Professor, Department of Banking and Insurance, Faculty of Commerce*
*The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat*

## Abstract

*The purpose of the present study is to analyse and predict the National Stock Exchange(NSE) Index. For Investors, who are seekers for Capital appreciation, the trend analysis and prediction is very important. Therefore, investors whether retail or institutional must predict the trend of stock market where the investments have been made in order to create wealth. The study uses the Markov Chain Model over a period from 3rd February 2020 to 29th January forming a 247 days trading data from the official website of NSE. The NSE Index shows three different states - Increase, Unchanged and Decrease. The Morkov Chain model is a probability model based on transition probability matrix and initial state vector. The transition probability metric has been obtained by observing the number of transitions from one state to another. The study explore that in the long run, regardless of the current state of NSE index, the probability of index increase, unchanged and decrease are 42.29%, 32.87% and 24.84 % respectively. It is observed that if the closing value of NSE index is in the state Increase in the day one then it can be expected to return to the state increase for the first time in two days or at the third day.*

***Keywords:*** *markov chain; trend analysis; prediction; transition probability matrix; indian stock market.*

## Introduction

The Stock Market is a barometer of any economy. The Stock market place a significant role in the life of Investors with the sole objective of making profit by investing in different shares of listed companies. The Stock market is the legal platform where such shares are traded in. And according to the performance of the company, the price of the shares grows up or down in the stock market. Apart from the performance of the company, worldwide trend of business, natural calamities, the sociopolitical policy, global market conditions also affect the stock market. Therefore, there lies the significance of stock market prediction which may benefit an investor. Various scientific methods have been implemented for stock market prediction through the analysis of past information. Investors in the stock market are interested to know the future occurrence of the market as they are motivated by the desire for capital appreciation. However

the fluctuating nature of the stock market makes the analysis and prediction a complicated phenomenon and making accurate prediction of stock market by any single method a very difficult task. Different methods such as Machine Learning, Neural Network, Moving Average, Regression Analysis, ARIMA, Data Mining, Markov Chain analysis, Hidden Markov model, are used by different researchers to forecast the stock market.

## Review of Related Work

Prediction is the method where we find the future value on a specific field with the help of the past data records and conclude the specific result. There are several fields where prediction is used and there is variety of prediction methods have been proposed and implemented. These methods range from Machine Learning (Jigar Patel, Sahil Shah, Priyank Thakkar and K Kotecha; David Enke and Suraphan Thaworn wong),Neural Network (Manna Majumder and MD Anwar Hussian; Akintola K.G., Alese B.K. and Thompson A.F.; SnehaSoni; Tiffany Hui-Kuang and Kun-Huang Huarng; R.K. and Pawar D.D.; Halbert white; Jing Tao Yao and chew Lim tan; Riki Herliansyah and Jamilatuzzahro), Moving Average [MA] method (Abdulsalamsulaimanolaniyi, adewole, kayoed s, Jimoh R.G),Data mining techniques (M. Suresh Babu, N. Geethanjali and B. Sathyanarayana; Y.L. Hsieh, Don-Lin Yang and Jungpin Wu; K. Senthamarai Kannan, P.

Sailapathi Sekar, M.Mohamed Sathik and P. Arumugam), Hidden Markov Models (HMM) (Md. Rafiul Hassan and Baikunthu Nath, Kavitha G, Udhayakumar A and Nagarajan D), Moving Average Autoregressive Exogenous (ARX) prediction model (Kuang Yu Huang, Chuen-Jiuan Jane),ARIMA model and vector ARMA model with fuzzy time series method (Hsien-Lun Wong, Yi-Hsien Tu and Chi-chen Wang; Swapnil Jadhav, Saurabh Kakade, Kaivalya Utpat, Harshal Deshpande) to Markov Chain Approach.

The Markov Chain Model is used by many researchers to predict and analyze the trend of the stock market in different times.

Styan, George P. H. and Smith, Harry Jr. (1962) used market behavioural analysis data provided by the transitional, or switching, habits of the consumer. They had taken types of laundry powder purchased by a housewife to define the state space of a Markov chain and predicted the future purchase behaviour and statistical inferences on the switching habits. Zhang, Deju and Zhang, Xiaomin (2009) applied the Markov process model for the Chinese stock market trend forecasting and concluded that operational status of the stock market is subject to the impact of various factors from market; hence, no single method can accurately predict changes in the stock market every day. Doubleday, Kevin J. and Esunge, Julius N. (2011) determined the

relationship between a diverse portfolio of stocks and the market as a whole. The DJIA and portfolio of five stocks was analysed using a Markov Chain. They concluded that when treated as a Markov process, the entire market was useful in gauging how a diverse portfolio of stocks might behave. Vasanthi S*et. al.* (2011) tried to predict the stock index trend of various global stock indices using Markov Chain Analysis and found that majority of the time, Markov model outperformed the traditional trend prediction methods. Badge, Jyoti (2012) used selected technical indicators of macro-economic factors of Indian stock market as input variable. Future prices were found through Hidden Markov Model (HMM). It was observed that HMM with PCA performed well and provides Mean Absolute Percentage Error (MAPE) 1.77%.Choji, Davou Nyap *et. al.*(2013) used Markov chain model to analyse and to make predictions of the two top banks on the three states. They found that regardless of a bank current share price, in the long run its share price will depreciate with a probability of 0.4229, remain unchanged with probability of 0.2072 and appreciate with a probability of 0.3699. Otieno, Simeyo *et. al.* (2015) used secondary quantitative data on the daily closing share prices of Safaricom from NSE website. It was observed that irrespective of the current state of share price, the model predicted that the Safaricom share prices would depreciate, maintain value or

appreciate witha probability of 0.3, 0.1 and 0.5 respectively. Bairagi, Aparna and Kakaty, Sarat C. (2016) used the Markov Chain model to analyze and predict the stock behaviour considering three different states, 'up', 'down' and 'remain same'. The study revealed that regardless of bank's current share price steady state probabilities of share 'up', 'down' and 'remain same' for SBI were 46.99%, 49.81% and 3.19% respectively. It was found that if the closing value of SBI share was in the state 'up' in the day one then it can be expected to return to the state 'up' for the first time at the third day. Singh, Waikhom Rojen *et. al.* (2017) presented a paper with objectives to predict the prompt future change in opening stock price and to find steady state transition probability matrix. The opening stock price of National Stock Exchange NIFTY 50 of India was studied and opening price of Stock was examined as following Markov chain. Bhusal, Madhav Kumar (2017) attempted to apply a Markov Chain model to forecast the behaviours of Nepal Stock Exchange (NEPSE) index. The study explored that regardless of the present status of NEPSE index, in the long run the index will increase with probability 0.3855, remains in the same state with probability 0.1707 and decrease with probability 0.4436.

The present study is an attempt to analyse trend and prediction of the National Stock Exchange (NSE) Index, India using Markov Chain Model in the

line of above mentioned work of the authors.

## Objectives of the Study

1. To study the long run behaviour of NSE Index
2. To find out the expected number of visits to a particular states and
3. To find out the expected first reaching time of various states.

Markov Chain and their respective diagrams can be used for predicting the likelihood of future market conditions. These conditions, also known as trends, are:

Increase (Bull Markets): periods of time where prices generally are rising, due to the investors having optimistic hopes of the future i.e., closing value is greater than closing value of the previous day.

Unchanged (Stagnant Markets): periods of time where the market is characterized by neither a decline nor rise in general price i.e., closing value is equal to the closing value of the previous day.

Decrease (Bear Markets) : periods of time where prices generally are declining, due to the investors having pessimistic views of the future i.e., Closing value is less than closing value of the previous day.

## Data and Methodology

For the purpose of the study, secondary quantitative data on the daily closing prices of NSE Index was obtained over a period from 3rd February 2020 to 29th January forming a 247 days trading data from the official website of NSE, www. nseindia. com. Here, the number of observations for Index value Increase, Unchanged and Decrease have been found as 105, 81 and 61 respectively. Since the last trading day is recorded as decrease and there is no information regarding next day transition, the total number of decrease should be recorded as (61-1) = 60.

## Basic Theory of Markov Chain Model

In 1907, A. A. Markov began the study of an important new type of chance process. In this process, the outcome of a given experiment can affect the outcome of the next experiment. This type of process is called a Markov chain.

Markov process is a special type stochastic process for which the future occurrence of any event depends only on present state. The set of values that Markov process takes is known as its state space. Depending on the values of state space the process may be discrete or continuous. The process with discrete state space is known as Markov chain. Markov chain is one of the mostwell-developed theories of stochastic process with wider applications.

## Definition of Markov Chain

The sequence $\{X_n, n \geq 0\}$ is said to be a Markov chain if for all state values $i_0, i_1, i_2, \ldots, i_n \in I$, then

$$P\{ X_{n+1} = j / X_0 = i_0, X_1 = i_1, \ldots\ldots\ldots, X_n = i\} = P\{X_{n+1} = j / X_n = i\}$$

where, $i_0, i_1, i_2, \ldots, i_n$ are the states in the state space $I$.

This kind of probability is called Markov chain probability. This imply that regardless of its history prior to time n, the probability that it will make a transition to another state $j$ depends only on state $i$.

## Transition Probability and Transition Probability Matrix

The transition probability as defined by the Markov chain is called transition or jump probability from state i to state j. Then,

$P\{X_{n+1} = j / X_n = i\} = p_{ij}$

This is also termed as one-step transition probability. If the transition probabilities defined above are independent of time (n), then such assumption is called homogenous or stationary Markov chain. Thus,

$P\{X_{n+1} = j / X_n = i\} = P\{X_1 = j / X_0 = i\} = p_{ij}$

The transition probabilities $p_{ij}$'scan be written or arranged in a matrix form as,

$P = [p_{ij}], i, j \epsilon I$

Here, the matrix $P$ is called transition probability matrix (TPM) or stochastic matrix. The matrix $P$ insists non-negative elements with row sum unity. Hence

$0 \le p_{ij} \le 1$ and $\sum_{j=1}^{n} P_{ij} = 1$ , $\sqrt{} \; i\epsilon I$

The k-step transition probability from state i to state j in k steps is ,

$P_{ij}(k) = P\{X_{n+k} = j / X_n = i\}$, $\sqrt{} \; k > 0$, $n \ge 0$, $I, j \epsilon I$

The Transition matrix P has the following property.

$P(n) = P^{n-1} * P = P^n$

## State Probability Matrix

The average transition process of Markov chain depends on the system's initial state and the transition probability matrix. The system initial state is a line matrix called initial probability vector defined as;

$P(X_0 = i) = P(0) = [p_0(0) \; p_1(0) \ldots p_n(0)]$, $0 \le p_i(0) \le 1$ and $\sum_{i=0}^{n} Pi(0) = 1$ for all states.

Similarly, the probability vector at time n may be defined as

$P(X_n = i) = P(n) = [p_0(n) \; p_1(n) \ldots p_n(n)]$, $0 \le p_i(n) \le 1$ and $\sum_{i=0}^{n} Pi(n) = 1$ for all state.

By knowing the initial state of system and transition matrix after $n^{th}$ step,

$P(k+1) = P(k) * P$

Which gives;

$P(1) = P(0) * P$

$P(2) = P(1) * P = P(0) * P^2$

$P(k) = P(k-1) * P = P(k-2) * P^2 = \ldots = P(0) * P^k$

Hence,

$P(k+1) = P(0) * P^{k+1}$ , for $k \ge 0$

This indicate that the transition probability matrix after (k+1) step is the product of initial probability vector and $(k+1)^{th}$ power of the one-step transition probability matrix.

## Irreducible Markov Chain

If it is not possible to partition the state space into two or more disjoint closed set, a Markov chain is said to be irreducible. Which means it consists only a single class.

## Absolute Probability

The state probability distribution $\{P_j(n), j \in I\}$ shows the probability of finding the particle at state j at the $n^{th}$ trial. If $P_i(0)$ be the probability of finding such particle at state I at initial trial then,

$P(X_n = j) = P_j(n) = \sum_i P(X_n = j, X_0 = i)$

$= \sum_i P(Xn = j|X0 = i)P(X_0 = i)$

$= \sum_i P_i(0).P_{ij}(n), n > 0$

Here, $\{P_j(n), j \in I\}$ is the initial probability distribution.

## Stationary Distribution of a Markov Chain

This property of Markov Chain states that regardless of the initial state of the system how does the stochastic process evolves, when the number of transition steps is sufficiently large, then the transition probability from state i to state j becomes settle down to some constant value. Thus,

$\lim_{n \to \infty} pij(n) = \pi j$

Such quantities are referred as steady state probabilities.

If the limits $\pi_j$ $=\lim_{n \to \infty} pj(n) = \lim_{n \to \infty} pij(n)$ exists and does not depend on the initial state, then

$P_j(n) = \sum_k P_k(n-1) P_{kj}$ becomes $\pi_j = \sum_k \pi_k P_{kj}$, as n $\to \infty$ for j = 0,1,2,..........

This is equivalent to

$\pi = \pi * P$

The probability distribution $\{\pi_j, i \in I\}$ is called stationary or invariant for the given chain if

$\pi_i = \sum_{i \in I} \pi i Pij$ such that $\pi_i \geq 0$ and $\sum_i \pi_I = 1$

This property of Markov Chain helps to determine the long-run behaviour of the chain.

## Expected Number of Visits

The expected number of visits made by the chain to state j starting from state i is given by

$\mu_{ij}(n) = E(N_{ij}(n))$

where, $N_{ij}(n)$ denote the number of visits to state j starting from state i in n-steps.

where,

$N_{ij}(n) = \sum_{k=1}^{n} Yij(k)$ with $Y_{ij}(0) = \partial_{ij}$, the Kronecker delta.

And $Y_{ij}(k) = \begin{cases} 1, if Xk = j/X0 = i \\ \quad 0, otherwise \end{cases}$

Then, $\mu_{ij}(n) \qquad = E[\sum_{k=1}^{n} Yij(k)]$

$= \sum_{k=1}^{n} E(Yij(k))$

$= \sum_{k=1}^{n} P[Yij(k) = 1]$

$\therefore \mu ij(n) = \sum_{k=1}^{n} Pij(k)$

Also the expected number of visits to state j from state i after long-run is;

$\mu ij(n) = \lim_{n \to \infty} E(Nij(n))$

## Expected Return Time

For a finite irreducible Markov chain the expected return time to state j, j $\in$ I can be obtain by taking the reciprocal of limiting probability $p_{ij}(n)$.

## Determination of Initial State Vector

The closing price shows three different states Increase, Unchanged and Decrease, as each closing price index is taken as a discrete time unit. The Initial state vector gives the probabilities of the three different states.

The state vector is denoted by $\pi^{(0)} = (\pi_1, \pi_2, \pi_3)$ then $\pi_1, \pi_2$ and $\pi_3$ gives the probability of

NSE index increase, unchanged and decrease as

$\pi_1$ = 105/246 = 0.4268

$\pi_2$ = 81/246= 0.3293

$\pi_3$ = 60/246= 0.2439

So, the initial state vector for NSE index is -

$\pi^{(0)}$ = [0.4268   0.3293   0.2439]

## Determination of Three State Transition Probability Metrics

The states are the chances that NSE index increases, that it unchanged and that it decreases. That transitions from one state to another observed from the data panel and were compiled in Table 1 as follows:

**Table 1: The transition matrix of nse index**

|  | Increase | Unchanged | Decrease |
|---|---|---|---|
| Increase | 50 | 38 | 105 |
| Unchanged | 25 | 29 | 81 |
| Decrease | 29 | 14 | 51 |

The transition probability matrix off NSE index using the above information can be constructed as;

$$P^{(1)}_{NSE} = \begin{bmatrix} 0.4762 & 0.3619 & 0.1619 \\ 0.3086 & 0.3580 & 0.3333 \\ 0.3922 & 0.2745 & 0.3333 \end{bmatrix}$$

The transition diagraph for the explicit presentation of transition probability of NSE index is shown below -

## Figure 1: Transition probability diagraph of NSE index
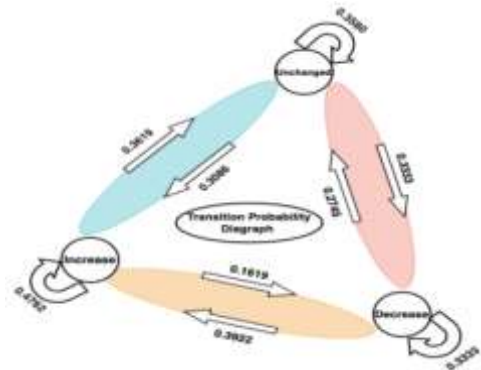


## Calculating State Probability for Forecasting the Next Day NSE Index Price

By applying initial state vector and transition probability metrics, it is possible to find out the state probability of various closing day in future. The state probability of closing price of NSE index for 248th day will be

$$- \pi^{(1)} = \pi^{(0)} * P_{NSE} =$$
$$[0.4268 \quad 0.3293 \quad 0.2439]*$$
$$\begin{bmatrix} 0.4762 & 0.3619 & 0.1619 \\ 0.3086 & 0.3580 & 0.3333 \\ 0.3922 & 0.2745 & 0.3333 \end{bmatrix}$$
248th   Day   =   $\pi^{(1)}$   =
[0.4228   0.3293   0.2480]

Which indicate that in the 248th day the state Increases has maximum probability, and it can be predicted that NSE index will increase in this day with probability of 0.4228.Similarly, the state probabilities of closing index price for 249th day will be

$$\pi^{(2)} = \pi^{(1)} * P_{NSE} =$$
$$[0.4228 \quad 0.3293 \quad 0.2480]*$$
$$\begin{bmatrix} 0.4762 & 0.3619 & 0.1619 \\ 0.3086 & 0.3580 & 0.3333 \\ 0.3922 & 0.2745 & 0.3333 \end{bmatrix}$$

249th Day $= \pi^{(2)} =$ [0.4228  0.3287  0.2485]

Thus, it can be said that there is a possibility of NSE index price increases with probability of 0.4228, unchanged with probability of 0.3287 and decreases with probability of 0.2485. These predictions are same with the actual data.

## The n-step Transition Metrics

The prediction of long run behavior of NSE index is very meaningful and important for the investors. The long run behavior of NSE index can be determined by using n-step transition probability matrix. The n-step metrics $P^{(n)}_{NSE}$ shows the behavior of stock index n-step later. If the number of steps increases then the $P^{(n)}_{NSE}$ converges to limiting transition metrics $P^{(\infty)}_{NSE}$, where each row of the matrix is identical,and it is said that the chain has attained steady state or state of equilibrium.The steady state metrics provides the probability of NSE index increase, unchanged and decrease in the future. In other words, the $n^{th}$ power transition probability metrics will provide the probability that the NSE index price will be in a particular state in n days , given that it is currently in some specified state. To examine the long-term behavior of NSE index, the higher order transition probability metrics is calculated with the help of Microsoft Excel.

$$P^{(1)}_{NSE}=\begin{bmatrix} 0.4762 & 0.3619 & 0.1619 \\ 0.3086 & 0.3580 & 0.3333 \\ 0.3922 & 0.2745 & 0.3333 \end{bmatrix}$$

$$P^{(2)}_{NSE}=\begin{bmatrix} 0.4167 & 0.3397 & 0.2436 \\ 0.4186 & 0.3177 & 0.2638 \\ 0.4391 & 0.3246 & 0.2363 \end{bmatrix}$$

$$P^{(3)}_{NSE}=\begin{bmatrix} 0.4210 & 0.3293 & 0.2497 \\ 0.4249 & 0.3268 & 0.2484 \\ 0.4235 & 0.3303 & 0.2462 \end{bmatrix}$$

$$P^{(4)}_{NSE}=\begin{bmatrix} 0.4228 & 0.3285 & 0.2487 \\ 0.4232 & 0.3287 & 0.2481 \\ 0.4226 & 0.3290 & 0.2484 \end{bmatrix}$$

$$P^{(5)}_{NSE}=\begin{bmatrix} 0.4229 & 0.3287 & 0.2484 \\ 0.4229 & 0.3287 & 0.2482 \\ 0.4228 & 0.3287 & 0.2485 \end{bmatrix}$$

$$P^{(6)}_{NSE}=\begin{bmatrix} 0.4229 & 0.3287 & 0.2484 \\ 0.4229 & 0.3287 & 0.2484 \\ 0.4229 & 0.3287 & 0.2484 \end{bmatrix} = P$$

$^{(7)}_{NSE}=$ P $^{(8)}_{NSE}=$ P $^{(9)}_{NSE}=$ P $^{(10)}_{NSE}=$ .........

The higher order transition probability matrix of NSE index computed above shows that after $5^{th}$ trading days since 247 trading days, the transition probability metrics tends to the steady state or the state of equilibrium. After then the transition probability matrix remains unchanged for the onward consecutive trading days. This steady state transition probability metrics of NSE index reveals the following information.

The probability that NSE index increases in near future irrespective of its initial state increase, unchanged or decrease is 0.4229. There is 0.2484 chance that the NSE index will decrease in near future irrespective of its initial state increase, unchanged or decrease. The chance of NSE index unchanged in the same state in near future irrespective of its initial state increase, unchanged or decrease is 0.3287.

If the NSE index starts in a given state with initial state vector$\pi^{(0)}$ =

[0.4268 0.3293 0.2439], then the probability of NSE index will increase, unchanged or decrease at a particular trading day in steady state condition can be determined by multiplying the initial state vector by the higher order transition probability metrics obtained at state of equilibrium. Then,

$$\pi(0) * P^{(6)}_{NSE} = [0.4268 \quad 0.3293 \quad 0.2439] * \begin{bmatrix} 0.4229 & 0.3287 & 0.2484 \\ 0.4229 & 0.3287 & 0.2484 \\ 0.4229 & 0.3287 & 0.2484 \end{bmatrix}$$
$$= [0.4229 \quad 0.3287 \quad 0.2484]$$

This result indicates the long run probability of NSE index being in increasing, unchanged or in decreasing states. The probability that the NSE index increases at the state of equilibrium is 0.4229, unchanged is 0.3287 and the probability that the NSE index decreases is 0.2484.

## Expected Number of Visits

Here an attempt has been made to find out the expected number of visits, the NSE index make to a particular state from another state in different steps.

For NSE index, the number of visits the chain makes in five trading days are given by the following metrics.

$$\mu_{ij}(5) = \begin{bmatrix} 2.1596 & 1.6880 & 1.1523 \\ 1.9982 & 1.6599 & 1.3419 \\ 2.1914 & 1.5458 & 1.2628 \end{bmatrix}$$

From the matrix obtained above it may be revealed that if the NSE index starts from the increasing state , the expected number of visits the chain for NSE index makes to the increasing state out of five trading days is 2.1596,

to the state unchanged is 1.6880 and to the state decrease is 1.1523.

Likewise, if the NSE index starts from unchanged state , the expected number of visits the chain makes to the state increase is 1.9982, to the state unchanged is 1.6599 and to the state decrease is 1.3419.

Similarly, if the NSE index starts from decreasing state, the expected number of visits the chain makes to the state increase is 2.1914, to the state unchanged is 1.5458 and to the state decrease is 1.2628.

## Expected Return Time

It will be meaningful to understand about the expected duration the NSE index will stay in the increase, decrease or unchanged state. The steady state transition probability are used to determine the expected return time to a state starting from the same state. For a finite irreducible Markov Chain, the expected return time to the same state is a reciprocal of the steady state probabilities. Here for the NSE index the expected return time to the increasing state, starting from the same increasing state is 1/0.4229 =2.3646. This result shows that the chain for NSE index should visit the increasing state on an average in two days. In the similar fashion, the expected return time to remain in the unchanged state, starting from the unchanged state is 1/0.3287 = 3.0423. This means the chain for NSE index should visit the state unchanged on an average three days. The expected

return time to the decreasing state, starting from the decreasing state is 1/0.2484 = 4.0258. This result helps to conclude that the chain should visit the decreasing state on an average four days.

## Conclusion

To predict the stock market behaviour, the Markov Chain model assumes that the performance of the stock market is completely affected by the stochastic factors. The movement of stock index to various states in a particular trading day is independent with the index of initial trading days but depends only on the index of the most recent day. The prediction of behaviour of stock market is very complexbecause the operational status of the stock market is subject to the influence of various factors from market; therefore, there is no single method available which can accurately predict changes in the stock market every day. Hence, investors can combine the results of forecasts from using Markov chain to predict with other factors and achieve relatively good results.     In this paper, the Markov Chain Model is applied to predict the behaviour of NSE Index. The predicted results are stated in terms of probability of certain state of NSE Index in the future. The model does not provide the prediction results in an absolute state. The initial state vector and the transition probability matrices are used to estimate the probability of NSE Index being in different states in the future days. The

steady state probabilities are obtained from the n-step transition probability matrices. The result of steady state probability matrix shows that the chance of NSE Index will increase in the future is 0.4229, will be unchanged in the near future is 0.3287 and will decrease in the near future is 0.2484. The expected number of visits to a particular state from other states are also computed. The result shows that out of five trading days, the expected number of visits the chain for NSE Index made to the increasing state starting from the increasing state is 2.1596. The expected number of visits to the decreasing state starting from the decreasing state is out of five trading days for the chain is 1.1523.The result of the expected return time shows that the chain for NSE index should visit the increasing state on an average in two days and the expected return time to the decreasing state, starting from the decreasing state is four days.

## References

1. RK, D., & DD, P. (2010). Application of Artificial Neural Network for Stock Market Predictions: A Review of Literature. *International Journal of Machine Intelligence*, *2*(2), 14–17. https://doi.org/10.9735/0975-2927.2.2.14-17
2. White, H. (1988). *Economic prediction using neural networks: The case of IBM daily stock returns*. 451–458.

https://doi.org/10.1109/icnn.1988.23959

3. JingTao YAO and Chew Lim TAN, "Guidelines for Financial Prediction with Artificial neural networks".

4. Yu, T. H. K., & Huarng, K. H. (2010). A neural network-based fuzzy time series model to improve forecasting. *Expert Systems with Applications*. https://doi.org/10.1016/j.eswa.2009.10.013

5. Enke, D., & Thaworn wong, S. (2005). The use of data mining and neural networks for forecasting stock market returns. *Expert Systems with Applications*. https://doi.org/10.1016/j.eswa.2005.06.024

6. Kannan, K. S., Sekar, P. S., Sathik, M. M., &Arumugam, P. (2010). Financial stock market forecast using data mining techniques. *Proceedings of the International MultiConference of Engineers and Computer Scientists 2010, IMECS 2010, I*, 555–559.

7. Olaniyi, Adewole, J. (2015). *Stock Trend Prediction Using Regression Analysis – A Data Mining Approach Stock Trend Prediction Using Regression Analysis – A Data Mining Approach. January 2011*.

8. M. Suresh babu, N.Geethanjali and B. Sathyanarayana (2011). Forecasting of Indian Stock Market Index Using Data Mining & Artificial Neural Network. *International journal of advance engineering & application*.

9. Hsieh, Y. L., Yang, D. L., & Wu, J. (2006). Using data mining to study upstream and downstream causal relationship in stock market. *Proceedings of the 9th Joint Conference on Information Sciences, JCIS 2006*. https://doi.org/10.2991/jcis.2006.191

10. Hassan, M. R., &Nath, B. (2005). Stock market forecasting using Hidden Markov Model: A new approach. *Proceedings - 5th International Conference on Intelligent Systems Design and Applications 2005, ISDA '05*. https://doi.org/10.1109/ISDA.2005.85

11. Cheng, C. H., Chen, T. L., & Wei, L. Y. (2010). A hybrid model based on rough sets theory and genetic algorithms for stock price forecasting. *Information Sciences*. https://doi.org/10.1016/j.ins.2010.01.014

12. Huang, K. Y., & Jane, C. J. (2009). A hybrid model for stock market forecasting and portfolio selection based on ARX, grey system and RS theories. *Expert Systems with Applications*. https://doi.org/10.1016/j.eswa.2008.06.103

13. Hassan, M. R., Nath, B., &Kirley, M. (2007). A fusion model of HMM, ANN and GA for stock market forecasting. *Expert Systems with Applications*. https://doi.org/10.1016/j.eswa.2006.04.007

14. Wang, Y. F., Cheng, S., & Hsu, M. H. (2010). Incorporating the Markov chain concept into fuzzy stochastic prediction of stock indexes. *Applied Soft Computing Journal.* https://doi.org/10.1016/j.asoc.2009.08.028

15. Wong, H. L., Tu, Y. H., & Wang, C. C. (2010). Application of fuzzy time series models for forecasting the amount of Taiwan export. *Expert Systems with Applications.* https://doi.org/10.1016/j.eswa.2009.06.106

16. Styan, G. P. H., & Smith, H. (1964). Markov Chains Applied to Marketing. *Journal of Marketing Research.* https://doi.org/10.2307/3150320

17. Zhang, D., & Zhang, X. (2009). Study on Forecasting the Stock Market Trend Based on Stochastic Analysis Method. *International Journal of Business and Management.* https://doi.org/10.5539/ijbm.v4n6p163

18. Doubleday, K. J., & Esunge, J. N. (2011). Application of Markov chains to stock trends. *Journal of Mathematics and Statistics.* https://doi.org/10.3844/jmssp.2011.103.106

19. Vasanthi, S., Subha M., V. and Nambi S., T. (2011). An empirical Study on Stock Index trend prediction using Markov Chain analysis. Journal of Banking Financial Services and Insurance Research 1, 72 – 90.

20. Badge, J. (2012). Forecasting of Indian stock market by effective macro- economic factors and stochastic model. *Journal of Statistical and Econometric Methods*, *1*(2), 39–51.

21. Nyap, D., Samuel, C., Eduno, N., & Titus, G. (2013). *Markov Chain Model Application on Share Price Movement in Stock Market. 4*(10), 84–95.

22. Otumba, E. O., Nyabwanga, R. N., &Maseno, P. O. B. (2015). *RESEARCH ARTICLE APPLICATION OF MARKOV CHAIN TO MODEL AND FORECAST STOCK MARKET TREND: A STUDY OF SAFARICOM SHARES IN NAIROBI SECURITIES EXCHANGE , KENYA.*

23. Bairagi, A., &Kakaty, S. C. (2016). Analysis of Brand Loyalty using Homogeneous Markov Model. *IOSR Journal of Economics and Finance.* https://doi.org/10.9790/5933-0704040609

24. Singh, W. R., Srivastava, S. K., & Ratlia, J. (2017). Application of Markov Chain in Predicting Change in Opening Stock Price. *International Journal of Mathematics and Its Application, 5*(4-B), 219–223.

25. Bhusal, M. K. (2017). *Application of Markov Chain Model in the Stock Market Trend Analysis of Nepal. 8*(10), 733–745.

# CUSTOMER'S SATISFACTION TOWARDS THE SERVICES PROVIDED BY PAYMENT BANKS IN MADURAI CITY

**Dr. R. SENTHIL KUMAR**

*Assistant Professor, Department of Economics*
*M.S.S.Wakf Board College, Madurai*

**Dr. V. SRIMAN NARAYANAN**

*Assistant Professor, Department of Economics, Centre for Research in Economics*
*The Madura College (Autonomous), Madurai*

## Abstract

*In India 2016 can introduce specialized banks or 'payments bank' to provide to the lower income groups and small businesses. A payments bank is like any other bank, but operating on a smaller or restricted scale, Credit risk is not involved with the Payments Bank. India's Demonetization in 2016 which was resulted into scrapping of high value currency notes of Rs. 500 and Rs. 1,000. The shortage of cash for daily needs lead to increase usage and quick adoption of e-payment portals, e-wallets and digital transactions and also resulted in encourage people to warm up to payment banks. One of the very important challenges faced by the Indian Government is Non-inclusion of banking sector in rural India. Payment Banks is designed as different kind of bank which is encouraged with the definite aim of extending the range of banking to massive majority of the unbanked and under banked sections of the population. In India in rural areas, less awareness about the concept among the target group, absence of physical presence or right mix of people, cash obsessed behavior and low confidence about the payment banks among the customers. Therefore, the present paper attempts to study the satisfaction of customers towards the services executed by the Payment banks.*

***Keywords:*** *payment banks, financial inclusion, saving accounts, small business*

## Introduction

Reserve Bank of India constituted a committee during the month of September 2013, head by Dr. Nachiket Mor to review about 'Comprehensive financial services for small businesses and low income households'. The committee was setup to propose measures for achieving financial inclusion and increased access to financial services. The committee surrendered its report to RBI during January 2014. One of the key suggestions of the committee was to be initiated specialised banks or 'payment banks' to cater to the lower income groups and small businesses so that every Indian resident can have a global bank account by January 1, 2016. A 'payment banks' is said to be any other bank, but working on a smaller or restricted scale. Credit risk is not complicated with the Payment Banks. It can carry out the majority banking

operations but cannot advance loans or issue credit cards. It can be accepted only savings and current accounts, not time deposits and cannot set up subsidiaries to undertake non-banking financial services activities. India's Demonetization in 2016 which was resulted into scrapping of high value currency notes of Rs. 500 and Rs. 1,000. The shortage of cash for daily needs lead to increase usage and quick adoption of e-payment portals, e-wallets and digital transactions and also resulted in encourage people to warm up to payment banks. Smartphone is an all in one device for information, content and entertainment which is also turning itself into a convenient medium for making Payment. Largely, Mobile Payments were considered as a product for developed markets but based on the current trends in India they were also just as appealing even in developing markets. The number of people those who were practicing digital wallets offered by payment banks will increase from 2.3 billion this year to nearly 4 billion or 50% of the world's population by 2024 (Courtesy: Juniper Research Report 2019).

**Perception of Payment Banks**
"A payments bank is similar to any other bank, but operating on a smaller scale without linking any credit risk. In simply expressions, it can carry out most banking operations but can't advance loans or issue credit cards. It can allow demand deposits (up to Rs 1 lakh), mobile payments/ transfers/ purchases, offer transfer of funds services and other banking services like ATM/debit cards, net banking and third party fund transfers".

Bharti-Airtel commenced India's first payments bank named Airtel Payments Bank in March 2017.Currently, there are six (6) payment banks operating in India which were initially eleven (11).

**Payment System's Vision in India–2021**
**Core Theme–Empowering Exceptional (E) Payment Experience**
The Vision 2021, India's payment and settlement systems progress the strong foundation construct over the last two decades. While the search towards a 'less cash' society continues, attended by the objective to have a less-card India as well, the endeavour is to also make sure increased efficiency, constant availability of safe, secure, accessible and affordable payment systems as also to serve segments of the population which are hitherto untouched by the payment systems. The decade to follow will witness a revolutionary shift in the method Indian citizens use digital payment options. It will also empower them with an e-payment experience that will be exceptionally safe, secure, truly world class, etc.

The theme Vision 2021 gives attention to on a two-pronged path of, (a) exceptional customer experience; and (b) enabling an eco-system which will result in this customer experience.

With this analysis, the Vision aims towards,

- Enhancing the experience of Customers;
- Empowering payment System Operators and Service Providers;
- Enabling the Eco-system and Infrastructure;
- Putting in place a Forward-looking Regulation;
- Supported by a Risk-focused Supervision.

## Statement of the Problem

One of the very important challenges faced by the Indian Government is Non-inclusion of banking sector in semi-urban and rural areas around India. Payment Banks is designed as different kind of bank which is encouraged with the definite aim of extending the range of banking to massive majority of the unbanked and under banked sections of the population. The existence of payment banking in semi-urban and rural areas is very much required. These banks promote to use the network of post office as well as the electronical or digital platform viz, internet banking, debit cards, point of sale devices to reach to vulnerable population. However payment banks could not attain its objective due to access and speed of internet in urban, semi-urban and rural areas, less awareness about the concept among the target group, absence of physical presence or right mix of people, cash obsessed behavior and low confidence about the payment banks among the customers. Hence, the present paper attempts to study the satisfaction of customers towards the services executed by the Payment banks.

## Objectives of the Study

The major objectives of setting up of a payment banks are to support financial inclusion by providing small saving accounts and payments/remittance services to migrant labour workforce, low income households, small businesses, other unorganised segment and other users.

- To make out the concept and problems of payment banks.
- To revise the satisfaction of customers towards the services offered by the payment banks.
- To categorize the demographical factors which are influenced by the satisfaction of the customers.

## Hypothesis

- There is no correlation between the Age and the satisfaction towards services provided by payment banks.
- There is no association between the Gender and the satisfaction towards services provided by payment banks.
- There is no connection between the Educational qualification and the satisfaction towards services provided by payment banks.
- There is no association between the Occupation and the satisfaction towards services provided by payment banks.
- There is no relationship between the monthly income and the satisfaction

towards services provided by payment banks.

## Methodology
## Sources of Data

Only the primary data are used in the present study. The data are collected directly from the customers of payment banks by using the interview Schedule prepared entirely for this study and is confined only to the area of Madurai city.

## Sample Design

The 150 Samples were preferred from the total population for this study. A convenient method of sampling technique is applied to obtain the Interview Schedule.

## Analysis and Interpretation
## Analysis of Socio-Economic Background of the Respondents

The study of the socio economic background of the respondents is necessary to ascertain that the social and economic factors have a direct impact on their reply towards the satisfaction about the services provided by the payment banks. The subsequent Table 1 shows that the socio-economic profile of the respondents.

### Table 1: Socio-Economic profile of the respondents

| Socio-Economic Variables | | No. of Respondents | Percentage |
|---|---|---|---|
| Age | Below 25 | 19 | 12.67 |
| | 25 to 35 | 53 | 35.33 |
| | 35 to 45 | 52 | 34.67 |
| | Above 45 | 26 | 17.33 |
| Gender | Male | 84 | 56.00 |
| | Female | 66 | 44.00 |
| Educational Qualification | No formal Education | 14 | 9.33 |
| | School level | 47 | 31.33 |
| | College level | 56 | 37.33 |
| | Professional | 16 | 10.67 |
| | Others | 17 | 11.33 |
| Occupation | Govt. Employee | 12 | 8.00 |
| | Pvt. Employee | 69 | 46.00 |
| | Professional | 18 | 12.00 |
| | Business | 30 | 20.00 |
| | Others | 21 | 14.00 |
| Monthly Income | Below-15,000 | 33 | 22.00 |
| | 15,000-30,000 | 90 | 60.00 |
| | 30,000-45,000 | 12 | 08.00 |
| | 45,000 and above | 15 | 10.00 |

**Source:** Primary data

From the above table it is inferred that, most of the respondents (35.33) belong to the age group "Between" 25-35, Majority of the respondents are

male (56%), majority of the respondents (37.33) are having the educational qualification up to the college level, majority of the respondents (46%) are working in private sector undertakings and highest number of the respondents (90%) having an income between Rs.15,000-Rs.30,000 per month.

**Analysis of Customer's Response Towards Socio Economic Background**

The Satisfaction towards services of payment banks differ from person to person according to socio-economic conditions of the respondents. The data in Table 2 reveals that the results obtained through chi-square test.

**Table 2: Socio-economic profile of the respondents and their satisfaction towards services provided by payment banks**

| Variable | Responses towards Services provided by Payment Banks 5% significance level | | Result |
| --- | --- | --- | --- |
| | Table value | Calculated value | |
| Age | 12.592 | 30.798 | Significant |
| Gender | 5.991 | 3.68 | Not Significant |
| Educational Qualification | 15.507 | 18.232 | Significant |
| Occupation | 15.507 | 25.71 | Significant |
| Monthly Income | 12.592 | 19.359 | Significant |

**Source:** Primary data

From the above table it is inferred that the variables such as age, educational qualification, Occupation and Monthly Income of the respondents have influenced the customer satisfaction towards the services provided by the payment banks, whereas the variable 'gender' do not have any influence in satisfaction towards the services of payment banks.

**Findings and Suggestions**

This paper examines the responses of the customers towards the services provided by the payment banks.

- It is observed that the variable 'Age' influences the responses of the customers, the payment banks are expected to create awareness about the conception of payment banking and its uses.
- The variable 'Educational qualification' also influences that they are expected to launch a campaign to educate the customers about services and its implications in order to eradicate negative attitudes and suspicions.
- Further the variables 'occupation' and 'Monthly Income' also influences the satisfaction of the

customers the payment banks are projected to find out the persons required for purpose of implementing the technological shifts with the customers as they themselves need to be motivated financially and technically to bring forward the intention of digital payments. These will make payment banks to be resourceful, profitable, and competitive and to cope with the changes and challenges that might be the outcome of globalized economy.

## Conclusion

The payment banks are required to work gradually with great efficiency by incorporating the advantages for the agents as well as the customers by introducing the great optimistic effects of using the technology based banking than the conventional banking. The process of shifting money from bank accounts to wallets will become truly seamless with the entry of payment banks and thus it is enormously possible that many customers may open payment bank accounts in addition to their usual bank accounts. These are meant that they segregate small-ticket payments from other bank payments by holding separate accounts. This is a prominent key with

value proposition and would be really a game change in Indian Banking System. But as it is a new way of instill in India, many people are still not aware about Payment Banks, its services, paybacks and security norms. Hence, the holders of Payment Banks have to create knowledge among people.

## References

1. RBI Guidelines for Licensing of Payment Banks: Opportunities and Challenges. (2014). Deloitte Touche Tomatsu India Pvt. Ltd.
2. Arunachalam, l., and Sivasubramanian, m. (2007) 'The future of internet banking in India', Vol 20.
3. Reserve Bank of India (2013), 'Banking structure in India – The way forward', Discussion Paper, August
4. All you need to know about payment banks (2016, Mach 29) Retrieved from – http://www.thehindu.com/all-you-need-to-knowabout-payment-banks/article7561353.acewww.rbi..org.in
5. https://www.jagranjosh.com/general-knowledge/what-are-the-key-features-of-payments-banks-in-india-1520858287-1

# CORPORATE GOVERNANCE COMPANY ACT, 2013 IN INDIA

**SHIMBHU DAYAL MEENA**

*Assistant Professor, Department of Business Administration*
*PNKS Government P.G. College, Dausa, Rajasthan*

## Abstract

*The concept of corporate governance is in the context of business language use a synonymous term for the English term management. Management and corporate governance can be regarded as a function in this sense corporate governance are activities that are provided by leaders in all areas of the company (Human Resource, Procurement, sales, management, financing, etc.)There has been a sea change in companies act, 2013 which has waved its way from principle of corporate governance practiced as the new key change in the act, The company act, 2013 has taken a foot forward from SEBI's clause 49 of listing agreement by introducing provisions in the company act 2013 which promotes corporate governor ship code in such a manner that it will no longer be restricted to only listed public company but also in listed public companies. Companies act 2013 lays greater emphasis on corporate governance as it clearly provides the rules and regulations for the same. Some of the Provisions of the companies act, 2013 are discussed.*

## Board of Directors

Board of directors is the decision making body of any company. It is the duty of the board to comply with all legal rules and regulations. So it is very important that a company constitutes a board of directors as per the provision of companies act, 2013.

## Directors

The board of directors are key constitute players for formulating and implementing corporate governance practices in the heart of the company machinery by making key decisions pertaining to setting long term corporate strategy of the company sharing high responsibility to run the company on good governance structure, bringing effective bond leadership to tackle the company's operations at all levels and monitoring its performance in a fair and transparent manner.

## Officers and Managerial Personnel

Managerial personnel and other officers of the company who serve the top management level under the companies Act, 2013 includes the chief executive officer, managing director or manager, whole time director company secretary.

## Composition of Board

The companies Act, 2013 section 149 provides for appointment of minimum three (3) directors in a public company and two (2) directors in a private company and one (1) directors in a one person company- OPC. A board can have a maximum of fifteen (15) directors but can appoint more directors subject to special approval.

## Woman Director

It is mandatory to appoint a women director in the following classes of company -

* Listed company
* Public unlisted company having paid-up share capital of one hundred crore rupees or more (100 crore Rs and more)
* Or having a turnover of 300 crore or more

## Resident Director

The company Act 2013 section 149(3) mandates that every company will have one director who has stayed in India for a period of not less than 182 days.

## Independent Director

Independent directors are in partial and bring expertise to the board. They play an important role in resolving conflicts among share holders and the company section 149(6) provides for the qualifications for appointing an independent director in a public company as per companies Act, 2013 public listed company shall have at least one-third of directors as independent directors and public unlisted company will have two directors if they meet the following criteria-

* Public companies having a sharecapital of 10 crore or more.
* Public companies having a turnover of 100 crore or more.

* Public companies having outstanding loans, debentures and deposits of more than 50 crores.

## Stake Holder Relationship Committee

The companies Act, 2013 as per section 178(6) if a company has more than one thousand share holders, debenture-holders, deposit-holders or any other security holders in a financial year then it is mandatory to constitute a stake holder relationship committee.

## Audit Committee

The audit committee looks after the financial reports and disclosures of a company. It is one of the most important components of a corporate governance structure under section 177 of companies Act, 2013. The following classes of companies are required to constitute audit committee and they are as follows-

* Listed company
* Public company having a share capital of more than 10 crores.
* Public company having a turnover of Rs 100 crores
* Public companies having deposits, outstanding loans or debentures more than 50 crores. An audit committee will consist of a minimum of 3 directors and independent directors will form the majority.

## Internal Audit

The companies act, 2013has mandated the internal audit for certain classes of

companies as specified unders section 138 of the companies act, 2013.

## Corporate Social Responsibility –CSR

The concept of CSR rests on the good corporate citizenship where corporate contributions to the social growth as a part of their corporate responsibility for utilizing the resources of the society for their productive use.

## Conclusion

The companies Act, 2013 empowers independent directors with proper checks and balances so that such extensive powers are not exercised in and unauthorized manner but in a rational and accountable way. The changes are a step forward in the right direction to smoothly run the management and affaires of the companies in the interest of stake holders. These are all welcome changes in the globalised corporate world of today.

## References

1. Dr. R.L. Naulakha company act & sect. practice pub. Ramesh book depot, jaipur
2. www.blog.ipleaders.in
3. www.ministryofcorporate affairs
4. www.mca.gov.in
5. www.oecd.org
6. www.dristhiias.com
7. Economictimes.com
8. Manoj Garg, Sangiv Garg corporate governance

# NARRATIVE TECHNIQUES IN CHARLES DICKENS' AND MULK RAJ ANAND'S NOVELS

**Dr. DARA BABU**

*Academic Consultant, Department of English, Kavali P.G Centre*
*Vikrama Simhapuri University, Nellore*

## Abstract

*According to the observation of the researcher, every novelist employs a narrative technique in writing his novels. The art of the narration is the key factor for the readers to understand a work of art. Besides the story and plot, the narrative technique that suggests the mastery of the novelist and that makes it comprehensible to the readers. There are three types of narrative techniques/methods such as generally used by the authors namely first, second and third person narratives respectively. In the first person narration the readers often cover with the pronoun 'I'. This 'I' may either refer to the novelist or a major role from the novel. The second person narration is suggested with 'You' and the third person narration is implied with either by the names of the characters or 'He', 'She', 'It'.*

***Keywords:*** *literature, expression, technique, narrative, sufferings, perpetual, medium, feelings*

## Introduction

The present research article intends to find out the prolific authors Charles Dickens and Mulk Raj Anand were used which techniques. This research article is based on the expectation and that art is primarily apish and that in outcome, the artists spend their golden time in sharing their great experiences alike in certain forms. Both Charles Dickens (1812-1870) and Mulk Raj Anand (1905-2004) were famous authors. Time and style these two are predominant devices to the narrator to modify a technique which ever that would be perfect for his literary work. The usage of *Stream of Consciousness technique* or *Magic Realism* these two were authorises the novelist to present the past and the present concurrently.

Time is predominant device to narrate the incidents in the novel. According to E.M. Forster every author has uses a chronology which fits according to his aim. In presenting the time the author may follow the linear or non-linear technique. Literature is a social art and style is the echo, the booming, of the author's or speaker's personality, and its victory is to be calculated by the full of response it call up in the reader or hearer. The technique is the man because it is perfectly, a reflection of the 'vision within' - it is something organic, something that has the breath of life, and this has been breathed into it by the personality of the man. "Style is the skin", said by Carlyle, "and not the mere coat"; it is the human himself, what is uniqueness in man. Whether

one is engaged in the recordation of fact or of the creative feeling of fact, 'nature of human' somehow intervenes; and colours and tempers the writing.

## Discussion

Charles Dickens and Mulk Raj Anand are humanitarian in all respects even in selection of major roles. Character is the mouth-piece by which the novelist that provides shape to his thought provocation. The main roles in the works of Anand and Dickens are outlined humanistic ally so that the readers can identify with them, feel for them and indicated such as there should be an end to exploitation.

Charles Dickens and Mulk Raj Anand have been chosen certain literary/narrative techniques in their literary works. In *David Copperfield* which is a semi-auto-biographical novel, Charles Dickens has used *first person narration*. Dickens has been uses the 'first person past and present spoken' method of narration in *Great Expectations*. The total story is described by the narrator Pip. Sometimes he tells us what happened in the past and that "alterations have been made in that part of the Temple since that time." It begins with David's birth onwards and mixes Dickens' early life of childhood. In the rest of literary works Charles Dickens and Mulk Raj Anand have used the *third person narration* and became acknowledgeable authors. They have rest of unity of time, place and unity of action in their literary works.

Charles Dickens arguing such as his times and that could be called 'mechanical' since the human element was not predominant in the industrial region. England witnessed a transitional time from life in villages to town-life and of small workshops expanded into Industries/factories and factories turning into mills with a huge investment of capital and supply of labour. Industrialization and urbanization were developing fast side by side with all their evil associated for appriciatable strengthen of time, until a Messiah that could come and reform the circumstances of living. Congestion, poverty, crime and moral corruption were their everyday features and a matter of deep analysis.

Infant mortality, expand of diseases, insanitary conditions, want of basic amenities and houses to live in, these were their daily harassing issues. Slums were very common and dreadful. Poverty pusses them to live in most filthy places. Material well-being of a few chosen people is not enough; the rich alone should not enjoy it. The labourers who work for the riches of the capitalists should also have a share in it, fixed Charles Dickens. The isolate effect of urban life and snobbery are some of the predominant themes in his literary works. For presentation of these themes he used literary devices like apostrophe, enumeration, circumlocution, vivid passages and figures of speech, etc.

The method or selection of words, characters, scenes, situations and way

of explanation of the special themes by both the English novelists stand poles apart. W.H. Hudson thinks that method is collected of three elements-intellectual, emotional and aesthetic. Meaning thereby, that a single thought that can be showing by profuse writers but the way of the present it differs. It would be unerring to say that for exhibition of humanism Charles Dickens employed that humorous repletion, employment of co-incidence, cheap jokes, isolation of common place things, breaking of skipped of grammatical injection, distinct form of self-expression and above all, creative painting of London life. He realistically represented the horrid and unhappy circumstances in workhouses, prisons, hovels of working class people, and the dark streets over taking with criminals and haunts of vice and violence.

As a crusader in the implementation of revolutionary techniques for bringing about a change in the set-up of the contemporary society, Charles Dickens' work and style through his novels had been superb. Another method which Dickens uses is the method of 'story within story.' The total novel deals with the story of Pip, but at the same time diffferent roles were tell their stories to Pip. Similarly Magwitch tells his story to Pip and Herbert. Both these realistic stories are depicted in a simple and straightforward manner. However the stories of Miss Havisham and Compeyson and Molly and Estella are depicted in a more complex and round about manner in order to generate suspense. These realistic stories are pieced together like a jigsaw puzzle and are similar to the stories in investigative fiction. Dickens engaged the limited-omniscient narrative juncture of view to focus our attention on the feelings of the hero and yet distance us from him since he never manifested himself worthy to be the self-creative authors such as David Copperfield and Philip Pirrip grow up to become.

## Conclusion

The researcher seeks in this present study that identifies the narrative techniques of prolific authors Chaless Dickens and Mulk Raj Anand. Dickens followed a uniform procedure in his notations for works in progress. They were entered on the facing halves of a folded sheet of paper. The right-hand side, serving what has been called *"the recording function,"* usually accommodated an outline of the principal episodes of the installment. The left-hand space, reserved for "the planning function," sheds much more light on the process of creativity itself. Here, the author explains over a huge variety of practical acceptance with regard to the handling of his story. The statement was that include catch phrases and hints for special themes were still to be improved, trial versions of characters' names and directions for their gateway and exits, opinions were about the placing and structuring of incidents. Frequently the communication that take the form of self-queries, as the author argues the

sudden use, adjourned, or rejection of material, alternate ways of presenting it, questions of strongly noticed and tone. Charles Dickens made that use of the figure of speech known to medieval rhetoricians as epanaphora, a series of equalant phrases each beginning with the same word or group of words: "Like a well, like a vault, like a tomb, the prison had no knowledge of the brightness outside". Dickens often uses a more colloquial style for development of social institutions through literary works.

Mulk Raj Anand breathed that real life into the Indo-Anglian literary work by introducing new subject-matter, characters, style, technique/method and special approach. He trusted such as literature should guide a society and solve their general issues. His fiction represents him as an author of dedication to his subject and philosophy. He is lacking in what Keats calls "Negative Capability". His choice of summary of exploitation, oppression and marginalisation of a section of the world by another section of the same society was under the pre-text of birth, religion, caste, Jati and his choice of major roles from among the under drop of the contemporary society like a coolie, an untouchable, an indentured labourer and his narrative technique of proclaiming distinct realism go but to prove his earnest commitment to the cause of the poor like Bakha, Munoo, Gangu and Bikhu. Anand has presented through his fiction the real India with all her

ugliness, squalour, dirt and sadness with artistic success and development.

The technique embrace by Mulk Raj Anand in his literary works suits his basic aim. His method of story-telling is dramatic style. He picks up main roles and then incident by incident builds up their background. Slowly and gradually the roles becomes alive and begins to live and breathe under his expert handling. Details are piled upon details. Minute touches and suggestions are fully made use of, to throw the character in proper relief. Irony and symbolism are other techniques that decorated in his novels. Foul-smelling and dirty dwellings of those who cleanses the filth and dirt of the society, denial of legitimate food to the hard-working labourers and over- feeding the lazy are used as symbols closely allied to life. Even the aim is signified by the desire-image of man. Another technique of the author is the use of compare and contrast method.

Mulk Raj Anand combines the technique of the omniscient author's narration with the scenic description, through the dialogues of the main roles. He engages our attention with his first sentence and holds on to the end. He creates on a grand scale and engages a high range of major roles and incidents. The development and success of his literary works were certainly owes much to Anand's well-organised and effective narrative technique and that ability to express his anger without harassment. He takes notes from life and logically classifies them under the

head of the biography of character. Anand used 'the stream of consciousness' technique with great mastery and skill. The episodes of *Coolie* move from place to place in the genre of a picaresque novel, the hero running from pillar to post. *The Big Heart* moves swiftly to its aim in the stream of consciousness technique. His genre is more varied and is seen at its best in his short stories. His intention is to present the emphasising of the world not as he is in himself, but as a victim of social wrong and ill-treatment like social exploitation and Anand's narrative technique is suitable e for the literary task.

## Bibliography

1. Dickens, Charles. *Oliver Twist.* Airmont Publishing Co., New York, 1963. Reprint.
2. ---. *David Copperfield.* Penguin Books, London, 1972. Reprint.
3. ---. *Hard Times.* Penguin Books, London, 1975. Reprint.
4. ---. *Great Expectations.* Rinehart, New York, 1998. Reprint.
5. ---. *Nicholas Nickleby.* Wordsworth Editions Limited, Britain, 2000. Reprint.
6. Anand, Mulk Raj. *The Old Woman and the Cow*, Kutub Popular, Bombay, 1960. Print.
7. ---. *Two Leaves and a Bud*, Kutub Popular, Bombay, 1970. Print.
8. ---. *The Big Heart*, Amold Heineman Publishers, New Deihi, 1980. Reprint.
9. ---. *Untouchable,* Arnold Heinemann Publishers, New Delhi, 1986. Reprint.
10. ---. *Coolie*, Arnold Heinemann Publishers, New Delhi, 1988. Reprint.

# AN ANALYSIS OF FINANCIAL LEVERAGE & PROFITABILITY OF GARMENT MANUFACTURING COMPANIES IN GUJARAT

**HITARTH KANSARA**
*Ph. D. Research Scholar*
*Sardar Patel University, Vallabh Vidhyanagar*

**Dr. SANJAY R AJMERI**
*Associate Professor, B. J. Vanijya Mahavidyalaya*
*Sardar Patel University, Vallabh Vidhyanagar*

## Abstract
*The financial activities of any companies are the major and key role playing activities. The term "Leverage" shows the amount of debt and the external borrowings of any company and in the basis of which the strength of the company can be determined. In this research paper, financial leverage analysis is made of four selected garment manufacturing companies in Gujarat. The objective of the study is to analyse the financial leverage, size on the basis of turnover and profitability of the company weather they are caring these ratios ideally or not. The researcher has adopted convenient sampling technique for the selection of the sample on the basis of availability of the company's data. Small sample t test is used as a statistical tool to analyse the data. The study concluded the significant relation in financial leverage but insignificant relation in size and profitability of the companies.*
***Keywords***: *financial leverage, size, turnover, profitability*

## Introduction

Financial Management is an appendage of the finance function. The financial management has become the most important branchy of business administration. It is not possible to think of any business activity in which finance is not included. The chairman and board of directors always accept and reject any project on the basis of their financial implication. Howard and Upton have observed: "Financial Management involves the application of general management principles to a particular financial operation". The main part of financial management is to raise the certain amount of finance with the lowest cost of capital. The leverage analysis of any financial activity measures the risk of acquiring the finance from the external source. The maximization of profit is measured on the basis of increment in earnings per share. The maximum profit of any firm or a company is based on the level of sales. Companies' financial decision are having significant impact on the different areas of the organisation. Thus, the most important aim of any financial management is to magnify the shareholders wealth. Which is only possible with the help of increase in profitability.

## Leverage

Leverage has been defined as "the action of a lever, and the mechanical advantage gained by it". Christy and Roden have defined Leverage, "the tendency for profit to change at a faster rate than sales". Leverage is an advantage and disadvantage which is derived from earning a return on total investment and which is different from the return in the owner's equity. It is a relationship between equity share capital and securities which creates fixed intertest and dividend charges. Financial leverage generally helps the investors to take an appropriate decision on bases of the leverage data.

## Profitability

Any decision of the company is totally dependent on the profit earning capacity of the company. To meet the financial requirement on time, the companies which are making good profit will only be able to cope up with the existing and upcoming debt. The good amount of profit of company will increase the credibility and so, the company can acquire more debt from outside. The past study shows the significant impact of high leverage in profitability.

## Review of Literature

Gautam Sen and Ravi Ranjan (2018) have examined the impact of financial leverage on the profitability of TVS motor company limited. The study was conducted in the basis of secondary data. The researcher concluded that the financial position of the selected company was not properly determined. The researcher suggested that the control should be maintain in expending the variable cost and fixed cost to maintain the adequate profit. The researcher concluded the significant impact on profitability of financial leverage.

Sanjay J. Bhayani and Butalal Ajmera (2011) in a research paper titled, "An Empirical Analysis of Financial Leverage, Earnings and Dividend: A Case Study of Maruti Suzuki India Ltd.". The researcher has attempted to study the theoretical aspects of financial leverage and earning per share. The researcher has collected the secondary data and used the correlation statistics. The researcher has concluded the insignificant relation between degree of financial leverage and earning per share.

EvgenyIlyukhin (2015) has attempted to analyse an impact of financial leverage on the financial performance of the selected firm in Russia. The researcher has conducted a researcher on the large sample selected from the Russian Joint Stock Exchange. The secondary data was collected for the period of ten years. The researcher has concluded that there is a no significant impact of financial leverage on firm's performance of the company.

## Objectives

- To analyse the financial leverage of the companies.

- To analyse the size (turnover) of the companies.
- To analyse the profitability of the companies.

## Hypothesis:

- $H_{01}$: There is no significance difference in financial leverage.
- $H_{02}$: There is no significance difference in size (Turnover).
- $H_{03}$: There is no significance difference in profitability.

## Methodology

The research is totally based on the secondary data which is collected from the annual reports of the selected companies. The data collected is for three years (2017–2019). The samples are selected on the basis of free availability of data and resources. The companies selected are as bellow.

1. Jindal Worldwide Ltd.
2. Globe Textile Ltd.
3. Soma Textiles & Industries Ltd.
4. Aarvee Denims & Exports Ltd.

## Tools and Technique

The researcher has used T-statistics to analyse the significance of the selected variables. The descriptive statistics like mean and standard deviation are also used the analyse the data. The analysis was done in excel as has easy and efficient way to analyse the data.

## Limitation of Study

The analysis is totally based on the secondary data and also for the period of three years. The researcher has also found out that the data which is hundred percent efficient for analysis was missing and calculated the ratio on the basis of the raw information available in the financial reports.

## Analysis and Interpretation

To analyse and interpret the data and to test the hypothesis, descriptive statistics is used.

### Table 1: Descriptive statistics

| Company | Mean | | |
|---|---|---|---|
| | Financial Leverage | Size (Turnover) | Profitability |
| Jindal Ltd | 3.602 | 28.59 | 20.83 |
| Globe Ltd | 0.82 | 12.5 | 17 |
| Soma Ltd | 1.67 | 23.47 | 7 |
| Aarvee Ltd | 1 | 11.69 | 19.33 |

To analyse the financial leverage, size and profitability of the selected companies is shown in above table. From the selected companies, Jindal Ltd shows the highest degree of financial leverage. The highest size (Turnover) is of Jindal Ltd as well to 28 times a year and so it also shows the highest profit earning capacity.

A sample is drawn from normal population and the mean and variance of the sample. The value of t is computed from the given data and it is compared with the table value of t with an appropriate degree of freedom at a required level of significance. The ideal financial leverage of a company is 0.5. So on the basis of that, the population mean is taken as 0.5.

### Table 2: Financial leverage

| Financial Leverage | | | | | |
|---|---|---|---|---|---|
| Sample Mean | Population Mean (Standard) | Standard Deviation | T-Statistics | D.f | 5% Significant |
| 2.03 | 0.5 | 3.98 | 1.15 | 3 | 3.18 |

The above table shows the T-Statistics of Financial Leverage of the selected companies. The t calculated value of the analysis is 1.15 and the t table value is 3.18 at 5% level of significance. So here, t calculated value is less then t table value so null hypothesis is accepted.

### Table 3: Size (Turnover)

| Size | | | | | |
|---|---|---|---|---|---|
| Sample Mean | Population Mean (Standard) | Standard Deviation | T-Statistics | D.f | 5% Significant |
| 19.06 | 10 | 3.6 | 7.55 | 3 | 3.18 |

The above table shows the T-Statistics of Size (Turnover) of the selected companies. The ideal Turnover of a company is 10. So, on the basis of that, the population mean is taken as 10.The t calculated value of the analysis is 7.55 and the t table value is 3.18 at 5% level of significance. So here, t calculated value is less then t table value so null hypothesis is rejected.

### Table 4: Profitability

| Profitability | | | | | |
|---|---|---|---|---|---|
| Sample Mean | Population Mean (Standard) | Standard Deviation | T-Statistics | D.f | 5% Significant |
| 16.04 | 20 | 2.06 | 5.76 | 3 | 3.18 |

The above table shows the T-Statistics of Profitability of the selected companies. The ideal Profit percentage is of a company is 20%. So, on the basis of that, the population mean is taken as 20.The t calculated value of the analysis is 5.76 and the t table value is 3.18 at 5% level of significance. So here, t calculated value is less then t table value so null hypothesis is rejected.

### Conclusion

The research study analysed the financial leverage, size and profitability of the company of a selected garment

and fabric manufacturing companies in Gujarat. The data analysis and findings state the significant relation with the population mean. In T-statistics, $t_{calc} < t_{tab}$ for financial leverage, so null hypothesis is accepted hence there is no significant difference between the sample and the standard value of financial leverage. Also, $t_{calc} > t_{tab}$ for size (Turnover) so null hypothesis is rejected hence there is significant difference between the sample and the standard value of turnover. $t_{calc} > t_{tab}$ for financial leverage so null hypothesis is accepted hence there is no significant difference between the sample and the standard value of financial leverage.

## References

1. Financial Management by P.V. Kulkarni and B.G. Satyaprasad2011 edition Himalaya Publishing House.
2. Financial Management by S.N. Maheshwari 2017 edition.
3. Journal of Accounting and Finance ISSN-09709029 by The Research Development Association Jaipur (India).
4. Gautam Sen and Ravi Rnajan (2018), "Rapport between Leverage and Profitability: A Study of TVS Motor Company", www.article.jofaa.org
5. Sanjay J. Bhayani and Butalal Ajmera (2011) in a research paper titled, "An Empirical Analysis of Financial Leverage, Earnings and Dividend: A Case Study of Maruti Suzuki India Ltd." www.academia.edu
6. EvgenyIlyukhin (2015), "The Impact of Financial Leverage on Firm Performance: Evidence from Russia". www.cyberleninka.ru

# A STUDY ON FIRM PERFORMANCE IN HUMAN CAPITAL DEVELOPMENT WITH DEVELOPMENTAL ECONOMICS

**Dr. R. ALAGESAN**

*Assistant Professor, Department of Economics*
*Mannar Thirumalai Naicker College, Pasumalai, Madurai*

**K. GANESH BABU**

*Research Scholar, Department of Economics*
*Mannar Thirumalai Naicker College, Pasumalai, Madurai*

## Abstract

*Human capital is obtaining wider attention with increasing globalisation and market saturation because of the recent worsening within the globe's numerous economies. Developed and developing countries emphasise an additional human capital development towards fast the economic process by devoting necessary time and efforts. Thus human capital development is one of all the essential solutions to enter the international arena. Specifically, corporations should invest essential resources in developing human capital that tends to impact performance positively. This paper examines the scope to which human capitals directly impact firm performance from numerous important views. Firm performance is viewed in terms of economic and non-financial performance. This research paper develops a model that explains the connection between human capital and firm implementation.*
***Keywords:*** *human capital, firm performance and workforce.*

## Introduction

In the current world market, firms are composed of competitors, despite trade. To develop a competitive advantage, it's necessary that companies really leverage their hands as a competitive weapon. A strategy for up hand productivity to drive higher prices for the companies has become a very important focus. Firms look to optimise their hands through comprehensive human capital development programs not solely to attain business goals; however, most vital is for protracted-term survival and property. To accomplish this endeavour, firms will need to invest funds to make sure that employees have the knowledge, skills, and capacities they should work effectively in a swiftly changing and complex environment.

In response to the modifications, most firms have embraced the notion of human capital has a tremendous competitive advantage that will enhance higher performance. Human capital development becomes a vicinity of AN overall effort to attain cost-efficient and firm performance. Hence, companies ought to perceive human capital that might enhance worker satisfaction and improve performance. This literature-based paper begins by shaping the ideas of human capital and

firm performance. It then discovers the human capital theory and affiliation between human capital and strong performance. In the final section, we tend to develop the model and conclude the importance of human capital as a pillar in future firm performance analysis.

## Definition of Human Capital and Firm Performance

To maintain the organisation's aggressiveness, human capital becomes an Associate in Nursing instrument to increase productivity. Human capitals ask processes that relate to coaching, education and alternative skilled initiatives to extend the degree of data, skills, abilities, values, and social benefits of an employee, which will lead to the employee's contentment and performance, and eventually on firm performance. Rastogi (2000) explicit that human capital is a crucial input for organisations, particularly for employees' continuous improvement in the main on data, skills, and abilities.

The perpetually ever-changing business surroundings need corporations to attempt superior competitive blessings via dynamic business plans that incorporate creative thinking and originality. This is essentially important for its long term sustainability. Human resource participation plays a significant role in enhancing firms' competitiveness (Barney, 1995). At a look, substantial studies were carried out on human capital, and their implications on firm performance were widely covered, and obviously, the human capital enhancement will result in greater competitiveness and performance (Agarwala, 2003; Guthrie et al., 2002). Meantime, there's a significant relationship between originality and firm performance underneath the human capital philosophy (Lumpkin & Dess, 2005).

## Human Capital Theory

The theory of human capital is frozen from the sector of economic science development theory (Schultz, 1993). Becker's (1993) classic book, Human Capital: A Theoretical and Empirical Analysis with special relevance education, illustrates this domain. Becker argues that different capitals embrace schooling, a laptop coaching course, and expenditures on treatment. And actually, lectures on the virtues of timing and honesty square measure capital too. In the real sense, they improve health, raise earnings, or increase a person's appreciation of literature over a lifespan. Consequently, it's absolutely to keep with the capital concept as historically outlined to mention that expenditures on education, training, and treatment, etc., square measure investment in capital. These don't seem to merely price; however, investment with valuable returns will be calculated.

## The Association between Human Capital and Firm Performance

Human capital focuses on two main elements that are people and

organisations. This concept has any been delineated by Garavan et al. (2001) that human capitals have four critical attributes as follows: (1) flexibility and adaptableness, (2) sweetening of individual competencies, (3) the event of structure competencies and (4) individual employability. It shows that these attributes successively generate add values to individual and structure outcomes. Their area unit varied findings that incorporate human capital with higher performance and property competitive advantage (Noudhaug, 1998); higher structure commitment (Iles et al., 1990); and enhanced organisational retention (Robertson et al., 1991). Hence, all these debates fundamentally focus on individual and corporate accomplishment.

From the specific level, Collis and Montgomery (1995) suggest that the importance of human capital depends on the degree to that it contributes to the creation of competitive advantage. From associate degree economic purpose of reading, transaction-costs indicate that firms gain a competitive advantage after they own firm-specific resources that rivals will not derive. Thus, because human capital's individuality will increase, the firm has incentives to take position resources into its management and aim to cut back risks and exploit productive potentials. Hence, people have to be compelled to enhance their ability skills to be competitive in their organisations.

The human capital theory has undergone a speedy development. Within its advancement greater attention has been paid to training-related features. This is much related to the personal perspective. Human capital investment is any activity that improves the standard (productivity) of the employee. Therefore, coaching is a vital element of human capital investment. This refers to the knowledge and training needed and undergone by a person that increases their capabilities in performing economic values activities.

## Conceptual Model

The purpose of this research study is to develop a model to point out the connection between human capital and firm performance. As argued within the earlier discussions, the overall human capital investment includes coaching, education, knowledge, and skills that may improve human capital effectiveness. Based on the literature reviews, it is assumed that human capital leads to greater firm performance. Firm performance can be viewed from two different perceptions: financial performance and non-financial performance. Financial performance includes productivity, market share, and profitability, whereas non-financial performance includes customer satisfaction, innovation, workflow improvement, and skills development.

## Conclusion

This paper explored the present literature on human capital and its impact on firm performance. The conceptualisation of human capital is closely linked to some fundamentals of economics and firm performance. The literature reviews show that there is reasonably strong evidence to show that the infusion of human capital enhancement' in organisations encourages innovativeness and better firm performance. This study also clearly substantiate the fact that financial performance is positively impacted through the consideration of human capital. In light-weight of this, the understanding of firm performance concerning human capitals should not be considered as a fact that only adds 'more zeros' in a firm's profits; it is rather transforming the entire workforce as the most valuable assets in order for the organisation to pave ways for more remarkable achievements via innovativeness and creativity. Hence, corporations ought to come up with some effective plans, especially in investing the various aspects of human capital as not only does it direct firms to attain greater. Performance, however, conjointly, ensures companies stay competitive for his or her long-run survival.

## References

1. Agarwala, T. (2003). Innovative human resource practices and organisational commitment: An empirical investigation.
2. International Journal of Human Resource Management, 14(2), 175–197.
3. Bantel, K. (1993). Strategic clarity in banking: Role of top management-team demography. Psychology Reports, 73, 1187- 1203.
4. Barney, J. B. (1995). Looking inside for competitive advantage. Academy of Management Executive, 9(4), 49–61.
5. Bates, T. (1990). Entrepreneur human capital inputs and small business longevity. The Review of Economics and Statistics, 72(4), 551-559.
6. Becker, B., & Barry, G. (1996). The impact of human resource management on organisational performance: Progress and prospects. Academy of Management Journal, 39(4), 779–801.
7. Becker, G.S. (1993). Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education (3rded.). Chicago: University of Chicago Press.

# NEW BANKRUPTCY CODE AND ITS REVOLUTIONARY IMPACT

**I. M. KARTHIKEYAN**

*Research Scholar, Department of Management Studies*
*Gandhigram Rural University,Gandhigram, Dindugal*

**Dr. K. RAJA ALIAS PRANMALAI**

*Professor & Head, Department of Rural Industries Management Studies*
*Gandhigram Rural University, Gandhigram, Dindugal*

## Abstract

*The Indian economy is bank based. Subsequently, government assistance of Indian economy relies upon the sufficiency of the financial framework. One of the key factors that frequent our economy is the developing Non Performing Assets (NPA) in the financial framework. NPAs not just influence the financial framework; they influence the monetary development of the country. Indebtedness is a circumstance when a firm can't meet its monetary commitments which are because of its loan bosses and when it is announced so by the official courtroom, it is called insolvency. The investigation genuine number of the recuperation paces of the banks and we may contrast it and the time frame before which would disclose to us the specific importance and the effect of IBC.*
**Keywords:** *bank, bankruptcy, NPA*

## Introduction

The strength of an economy of a nation relies upon how well positions are made and supported in the economy. For the stream to be maintainable, individuals ought to have manageable acquiring which is given by their separate positions. For the tasks to be maintainable there ought to be acceptable enterprises and associations. For all the segments in the economy to live in congruity, there ought to be a sound and dissolvable monetary framework. The monetary arrangement of an economy can be market based or bank based.

In the World Bank's simplicity of working together record, India stands 130th in the general rankings and as respects settling indebtedness, India stands 136th among 189 nations. In the current day situation, without a viable Bankruptcy Code, it requires around four years to determine an instance of Bankruptcy in India, figured by a World Bank report to be twice as that of China. The recuperation time in major league salary individuals from OECD nations is 1.5 years. It further figures that the recuperation rate in India is 25.7 pennies on the dollar versus 80.4 pennies in the US and 88.6 pennies in the UK.

## Need for a New Bankruptcy Code

Exceptionally stable bankruptcy laws is an absolute necessity for building up the credit markets. To address the

equivalent, Ministry of Finance set-up the Bankruptcy Law Reform Committee (BLRC)in2014 under the chairmanship of Shri T. K. Vishwanathan. The great goal of the BLRC was to concocted another insolvency structure that would supplant the current system.

## Bankruptcy and Its Genesis in India

All organizations are begun with inborn danger and that is the vital purpose behind the result/benefit that they make. Some of them may definitely bomb because of the thought which may have been confounded or the disappointment in the execution of an adroit marketable strategy. Yet, when all is said in done, each business, despite being thoroughly thought out, has a level of danger to fizzle.

The current structure concerning chapter 11 and bankruptcy in India are as per the following:

- The Presidency Towns Insolvency Act, 1909.
- The Provincial Insolvency Act, 1920.
- Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act.
- Recovery of Debts due to Bank and Financial Institutions Act, 1993.
- Companies Act, 2013.
- Sick Industrial Companies (Special Provisions) Act, 1985.

From the above rundown that there are different laws that manage indebtedness and chapter 11 in India which cover and there are settling gatherings for monetary

disappointment which has prompted tedious legitimate redressal measure.

To reduce the issue of covering purview, India has taken a goliath jump in presenting the new Insolvency and Bankruptcy Code (IBC), 2016. The new code will smooth out the goal/liquidation measure. It will give leave alternatives to wiped out and wiped out firms. It will guarantee speedy and brief activity in the beginning phase of obligation default by a firm and consequently will bring about ideal recuperation rate.

There are two manners by which the banks' NPA positions may get influenced by new IBC. They are as per the following:

- Filing under IBC for their current corporate NPAs.
- The recuperation esteem that the banks will get.

## Options to Banks for Filing Under IBC For Their Existing Corporate NPAs

There are three answers in which the banks depend on for the recuperation of their awful advances which are for the most part called as Corporate NPAs. They are:

- To start the lawful activity against the borrower for the recuperation of duty under Recovery of Debts Due to Banks and Financial Institutions Act, 1993 and the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act (SARFAESI Act), 2002.

- The Sick Industrial Companies Act (SICA), 1985 or the wrapping up interaction under the Companies Act, 1956.
- The banks may settle on Corporate Debt Restructuring (CDR) or Strategic Debt Restructuring.

The IBC has given arrangement for changing the above cases over to go under the domain of IBC. For the cases that are now forthcoming under SICA at the Board for Industrial and Financial Reconstruction (BIFR) and Appellate Authority for Industrial and Financial Reconstruction (AAIFR), the eighth timetable of IBC furnishes reduction of the current cases with an alternative to reinitiate them as new cases under IBC, inside a time span of 180 days.

For cases on any remaining discussions, be it legitimate or administrative, they can be reinitiated as new cases under IBC. All the wrapping up cases can likewise be reinitiated under IBC aside from one for example at the point when the High Court has conceded a stay on other lawful procedures being started while the twisting up is being heard.

**There are two possibilities here:**
Status quo will win and the Creditors may not move toward IBC. The banks, despite the fact that they could locate an early NPA, may not report or may not carry it to IBC as they need to make adequate arrangements and now and then need to bring about misfortunes if the recuperated esteem is less. In spite of the fact that there are misfortunes if the norm is available, the banks may attempt to postpone the terrible news and henceforth may not start the IRP.

Section 6 of IBC states that:

Where any corporate account holder submits a default, a monetary loan boss, an operational lender or the corporate indebted person itself may start corporate indebtedness goal measure in regard of such corporate borrower in the way as given under Chapter II (Corporate Insolvency Resolution Process).

Subsequently it can likewise happen that the gatherings other than the monetary leaser may start the IRP and different gatherings need to take action accordingly.

Regardless of whether banks are not able to start the interaction, in the event that any of the leaser starts IRP, at that point different loan bosses including the banks needs to conform and must be important for the IRP. The underneath stream diagrams portrays the entire interaction that will be followed under IBC. Examination to contemplate the effect of Bankruptcy Code on the financial framework. There are two manners by which IBC could influence the current terrible resources in the financial framework.

- Reduction in NPAs
- Recovery of the NPAs

Default

↓

Application before National Company Law Tribunal (NCLT) with proof and name of proposed Resolution Professional

↓

Rejection of Application (14 days from the date of receipt of application)

Admission of Application (14 days from the date of receipt of application)

↓

Declaration of moratorium and appointment of Interim Resolution Professional (IRP)
IRP to be appointed within 14 days from insolvency commencement date

↓

Vesting of powers of Board & Management of affairs by IRP

↓

Collection of all claims and constitution of Committee of Creditors

↓

Appointment of RP and vesting of powers in RP

The impact has to be seen after banks start opting the Bankruptcy Code route.

## A Cross Country comparison of the insolvency process

| S. No | Description | India | Brazil | UK | USA |
|---|---|---|---|---|---|
| 1 | Trigger | Event of Default or Voluntary | - | Default, Insolvency and Voluntary | Default, Insolvency and Voluntary |
| 2 | Minimum amount of Default to trigger the process | INR 1 Lakh | - | GBP 750 | NA |
| 3 | Debtor or Creditor Control | Creditor | Debtor | Creditor | Debtor |
| 4 | Control of the company during insolvency process | Insolvency professional | Board of Directors (No concept of Insolvency Professional) | Insolvency Professional (Administrator) | United States Trustee |
| 5 | Recommendation for the appointment of IP | Creditor, Debtor or Court | Creditor, Debtor or Court | Creditor, Debtor or Court | Creditor, Debtor or Court |
| 6 | Is there a moratorium period? | Yes | Yes | No | Yes |
| 7 | Time limit for the moratorium | 180 days + 90 days | Entire period till plan is approved | Entire period till plan is approved | Entire period till plan is approved |
| 8 | Insolvency Professional Agencies | 4 | - | 7 | Separate Trustee for 21 geographical |
| 9 | Specialized courts to deal with insolvency | Yes | Yes | No | No |
| 10 | Compulsory to form a Creditors Committee | Yes | No | No | No |
| 11 | Renewal / Term of the Insolvency Professional Agencies | Life membership | N/A | Annually | Every Five Years |

## Merits of the Indian Bankruptcy Code

- The Secured lenders and the workers compensation for a time of two years has been given the higher need considerably over the Government Claims which was not the situation in Companies Act, 1956.

- All the leasers presently have solid system set up that abrogates all the past instruments which could be looked for when required. This will build the Financial Discipline among the borrowers as they can't get away from the law and the goal component under the IBC is additionally time bound.

- The non-monetary loan bosses who didn't have any component set up, presently has a bunch of very much laid techniques which could assist them with recuperating their contribution.

- The Banks can no more conceal the pressure in the framework as there can be examples where the non-monetary leasers may have moved toward the discussion path before the Banks order a specific borrower as a NPA. This will improve the straightforwardness in the framework.

- The typical time taking for an organization to declare financial insolvency and go for liquidation or take over is approx. 4.3 years in India as per World Bank's Ease of Doing Business rankings. The human resources and the venture

information would be lost and it will be truly hard to turn up the organization and to place in the development way. With the new Bankruptcy Code's clear timetable of 180 days to limit of 270 days, the human resources and the undertaking information can be protected.

- The estimation of the firm falls apart once it becomes non-performing and with regards to liquidation following a time of 4.3 years, it will get just a focused on value which will be substantially less in worth. With the new Bankruptcy Code and the rigid timetables for liquidation, the worth the resources get will be a lot higher.

## Demerits of the Indian Bankruptcy Code

- The Institute of Company Secretaries of India, Institute of Chartered Accountants of India and the Institute of Cost Accountants of India have been enlisted as the Insolvency Professional Agencies and it is exceptionally certain that they need to attempt the undertakings of Insolvency Resolution and Liquidation. It must be discovered whether these bodies convey the operational skill to run or pivot the organization during the ban time frame. The free Insolvency Professionals ought to be permitted so that there is a decent rivalry and skill across ventures.

- Development of Professionals with respectability and abilities to play out the entire Insolvency Process capably is exceptionally vital.

- Though the non-monetary loan boss may summon the Bankruptcy Code, the council of lenders just comprises of the agents from Banks and Financial Institutions. The Non-Financial Creditor doesn't have any democratic right in the goal system. Irreconcilable situation may emerge and it probably won't get the expected outcomes.

- The Interim Resolution Professional, who will run the organization during the interval time frame before the Creditors board of trustees showing up at a choice, might not have the ability to run the organization. Our experience so far with Asset Reconstruction Companies plainly shows that it is hard to pivot the organization and if the organizations end up in some unacceptable hands it will be much more lamentable. The Organizations that have been picked just carry the monetary mastery to the table and they may need operational ability which would be the need of great importance.

- An unmistakable division is required with regards to burden recuperation. In the event that the Creditors approach the NCLT and conjure Bankruptcy and if the assessment specialists take the full continues to recuperate their duty, the motivations for the lenders to take up this course may be less.

- There is right now no cross line bankruptcy system.

## Conclusion

The New Bankruptcy Code is, undoubtedly, an invite step regarding the insolvency interaction in India. We have tended to one of the critical boundaries in the Ease of Doing Business Index where we were missing for quite a long time. Whenever executed appropriately and if the Code develops as per the changing monetary environment, it will be exceptionally valuable for the banks, borrowers, controllers and the Government by the day's end. It improves the trust in our framework. There is far for the major parts in the Indian framework to behaviorally advance and acknowledge the idea of Bankruptcy, however when it is done, it will fundamentally improve the straightforwardness in the framework. When the framework begins using the IBC, following a year or something like that, we may contemplate the genuine number of the recuperation paces of the banks and we may contrast it and the time frame before which would reveal to us the specific importance and the effect of IBC.

## References

1. DBIE (Data Base on Indian Economy) website of RBI.
2. Indian Bankruptcy Code as published in the Gazette
3. www.rbi.gov.in

# A STUDY ON INDIA'S RURAL SECTOR

**T. ANNA SELVAM**

*Ph.D Research Scholar (Reg. No. 8373)*
*PG Department of Economics and Research Centre*
*S.T Hindu College, Nagercoil, Affiliated to Manonmaniam Sundaranar University, Tirunelveli*

**Dr. P. N. SALI KUMAR**

*Associate Professor and Head*
*South Travancore Hindu College, Nagercoil*

## Abstract

*Development of rural sector is a multi-dimensional task that includes human development. It includes various government programmes like watershed development, tribal development, poverty and human development etc. It explained budgetary allocations by states, Outlays for Ministry of Rural Development for Last five years and 2018-19also.*

***Keywords:*** *development programme, budgetary allocation, capital, expenditure.*

## Introduction

Rural development is a multidimensional task that includes human Development. The UNDP's Human Development Index (HDI) presently ranks India 131 out of 188 countries. In light of this, NITI Aayog has identified 115 aspirational districts in 28 state for transformation. It aims to remove the high inter-state and inter-district heterogeneity in living standards through a mass movement to quickly and effectively create transformation.

NABARD has been an active partner in carrying forward government programmes aimed at agriculture and rural development. For instance, it proposes to scale-up interventions through convergence for the aspirational districts. NABARD has been implementing various programmes for income generation, poverty reduction and livelihood improvement of rural people with the aim of supporting the attainment of the goals of GoI. For this, NABARD has been providing refinance for various activities under agriculture and allied sectors, GoIprogrammes / Schemes implementation, financial assistance for promotion / development programmes such as, watershed development, water conservation & management, rejuvenation of water bodies, water campaign, Natural Resource Management, climate adaptation and mitigation, Tribal Development, micro irrigation, Producer Organisations (POs), SHG-Bank Linkage programme for women development, skill development, etc. Further NABARD has also been providing financial support for infrastructure development related to agriculture, irrigation, roads/ connectivity, warehouses, social sector

and market infrastructure etc. Which would help towards attaining the goal.

## Poverty and Human Development

Committed to achieve Sustainable Development Goals (SDGs), poverty alleviation and inclusive growth, GoI has been implementing various programmes and schemes where NABARD has been an active partner. The Pradhan Mantri Jan Dhan Yojana (PMJDY), MUDRA Yojana, And Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) are some of the major programmes of GoI, aiming at social inclusion, income generation and reduction in poverty. Over 179.4 million person-days of employment was generated by MGNREGA during 2017-18 (up to 17 January 2018) (GoI 2018b). Pradhan Mandri Awas Yojana-Gramin (PMAY-G) is another important programme to provide housing to all by 2022. Separate schemes are also being implemented by GoI through different ministries to achieve food and nutrition security. For instance, more than 800 million people are being provided food grains at affordable prices through the Public Distribution System (PDS) (GoI 2018a), which is supplemented by mid-day meals to school students, nutrition enhancement programme etc.

**Table1: Outlays for ministry of rural development for last five years and 2018-19(Amount in crore)**

| Year | Outlays of Rural Development | |
|---|---|---|
| | Budgetary Estimates | Revised Estimates |
| 2013-14 | 80194 | 61810 |
| 2014-15 | 83793 | 70656 |
| 2015-16 | 73269 | 79220 |
| 2016-17 | 87700 | 97690.64 |
| 2017-18 | 107758.24 | 110874.34 |
| 2018-19 | 114915.32 | - |

**Source:** Budget documents of Government of India

Table.1 reveals 80194 crore budgetary estimates on rural development in the year of 2013-14. This amount was slightly increased to 83793 crore in 2014-15, but it decreased to 73269 crore in 2015-16. In 2016-17 the budgetary estimates on rural development in 87700 crore. This amount was slightly increased to 107758.24crore in 2017-18, 114915.32 crore in 2018-19.

## Budgetary Allocations by States

An increasing thrust by GoI on rural development, through investment in rural infrastructure, is translating into increased budgetary allocations on rural development in state budgets. Budgetary estimates for capital expenditure on rural development for 2017-18 (revised estimates) with regard to select states, are presented in Table 2

## Table 2: Budgetary estimates in select states' expenditure for rural development capital expenditure 2017-18 (Revised Estimates)
### (Amount in Rs. crore)

| State | Total State Budget | Revenue +Capital Expenditure (Rural Development) | Capital Expenditure (Rural Development) | Share (%) of Capital Expenditure to Total Expenditure (Rural Development) (Col 4 as % of Col.3) | State(%) of Expenditure on Rural Development to Total State Budget (Col.3 as %of Col.2) |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Andhra Pradesh | 1,59,822 | 8,837 | 879 | 10.0 | 5.5 |
| Assam | 99,454 | 7,137 | 1,280 | 17.9 | 7.2 |
| Bihar | 1,72,884 | 22,249 | 9,335 | 42.0 | 12.9 |
| Chhattisgarh | 78,623 | 4,406 | 669 | 15.2 | 5.6 |
| Gujarat | 1,67,611 | 5030 | 1232 | 24.5 | 3.0 |
| Jharkhand | 76044 | 9688 | 2085 | 21.5 | 12.7 |
| Karnataka | 176880 | 7950 | 1042 | 13.1 | 4.5 |
| Kerala | 111351 | 2280 | 490 | 21.5 | 2.0 |
| Madhya Pradesh | 164295 | 9895 | 2285 | 23.1 | 6.0 |
| Maharastra | 323652 | 12216 | 1586 | 13.0 | 3.8 |
| Odisah | 107235 | 8357 | 149 | 1.8 | 7.8 |
| Punjab | 112797 | 689 | 166 | 24.1 | 0.9 |
| Rajasthan | 190615 | 20286 | 2354 | 12.5 | 10.6 |
| Tamil Nadu | 205442 | 6265 | 1604 | 25.6 | 3.2 |
| Telangana | 142506 | 6777 | 4507 | 66.5 | 4.8 |
| Uttar Pradesh | 368401 | 22403 | 4261 | 19.0 | 6.1 |
| West Bengal | 185998 | 19930 | 2176 | 10.9 | 10.7 |

**Note:** Rural development also includes Special Area Programmes.

**Sources:** Budget documents of states governments (calculations by NABARD).

Two states having more than 40 per cent of capital expenditure to total budgetary estimates for rural development for the year 2017-18 were

Telangana (66.5 per cent) and Bihar (42.0 per cent), while six other states had shares ranging between 20 and 30 per cent viz., Tamil Nadu (25.6 per cent), Gujarat (24.5 per cent), Punjab (24.1 per cent), Madhya Pradhesh (23.1 per cent) Jharkhand (21.5 per cent), and Kerala (21.5 per cent). Further, it is observed that four states allocating more than 10 percent of their budgetary estimates to rural development in the total State Budget in 2017-18 were Bihar (12.9 per cent), Jharkhand (12.7 percent), West Bengal (10.7 per cent) and Rajasthan (10.6 per cent)

## Conclusion

National Bank for Agriculture and Rural Development (NABARD) has played a significant role in development of rural sector through varions programmes and funds like Rural Infrastructure Development Fund (RIDF), LTIE etc and shall continue its support for rural development in the country.

## References

1. Economic Survey 2017-18. Volume 1,New Delhi. Department of Economics Affairs Ministry of Finance.
2. Economic Survey 2017-18 Volume II, New Delhi. Department of Economic Affairs, Ministry of Finance.
3. Annual Report 2017-18 New Delhi. Ministry of Rural Development. IMF (2018). World Economic Outlook. April 2018 Wahington DC. International Monetary Fund.
4. NITI Aayog (2017). India: Three Year Action Agenda 2017-18 to 2019-20 New Delhi. NITI Aayog.
5. (2018) Transformation of Aspirational Districts: Baseline Ranking and Real – time Monitoring Dashboard New Delhi. NITI Aayog. RBI (2018). Financial Stability Report Issue No. 17 June 2018 Mumbai Reserve Bank of India. World Bank (2018). Global Economic Prospects. January 2018. Washington DC. World Bank.
6. NABARD, annual report 2017-18
7. National Institution for Transforming India, NITI Aayog, Nov, 2017.
8. http://www.nabard.org>auth>tebder

# AN EXPOSED PRIVACY: ANALYZING THE PUBLIC DEBATES OVER PRIVACY

**ANIRUDDHA MAHAJAN**
*Former M. Phil. Research Scholar*
*Tata Institute of Social Sciences, Mumbai*

## Abstract

*Privacy is a very significant element of human life that empowers an individual to perform all other fundamental rights. Privacy ensures that any of the outsider forces will not have access to our private spaces. A significant increase in technological upswing and surveillance into people's activities by state and social media raised global concerns over privacy. The growing prominence of information technology in people's lives had a vital impact on the nature of public policy debates regarding privacy. Amidst the debate over privacy, technology, policy interventions, surveillance, it is challenging for the state to sensitively balance public security and protect individual's privacy as a fundamental right. While balancing between the legitimate concerns of security and the privacy values, the state should categorically frame their equitable aims for national security and their nature cum scope. The state should have a strong mechanism to confine the national security surveillance system to use private data only for public security purposes. There should be a comprehensive regulatory framework by the state that includes transparent encryption technologies, regulation for the protection of databases, data safety, proper collection and classification of data, etc. The rightful public policies need to be formulated which protect both private and public interests. It will also be the prominent role of the policymaker to bring center, state, and panchayat raj institutions into the play constructively for the meaningful implementation of the above steps to deal with privacy and technology concerns.*
***Keywords:*** *privacy, security, surveillance, policy, social media*

## Introduction

Privacy empowers an individual to perform all other fundamental rights, which makes it a significant facet of human life. It has strengthened the Freedom of expression and Right to information. Privacy ensures that any of the outsider forces will not have access to our private spaces. In the state of democracy, the right of disagreement is hollow until the protection of privacy is assured. In 1890, the concept of privacy was envisioned by Warren and Brandeis as a legal right. A significant increase in technological upswing and surveillance into people's activities raised global concerns over privacy.

The growing prominence of information technology in people's lives had a vital impact on the nature of public policy debates regarding privacy. Being an informed society, the tendency of an individual to share their personal information kept on increasing. As that information becomes accessible to

people and institutions concerns about privacies abound. (Nelson, 2004)

In the Indian context, privacy has been established as a fundamental right guaranteed by the Indian Constitution in K.S.Puttaswamy vs. Union of India case. Therefore any breaching of an individual's privacy ultimately violates the core value of the constitution. In the light of emerging technologies that seek to gather a significant amount of personal data, protection of privacy becomes a policy priority. Human life is surrounded by multiple social media applications. It has enhanced connectivity and also helped humans in multiple ways, but it has also tracked down human activities and data, which is alarming. The Personal Data Protection Bill, The recent snooping order, and the implementation of *Aadhaar* by the state have also been severely criticized over the privacy issues. All these not merely took dig on the fundamental right of privacy but also exposed an inefficient privacy protection mechanism in India.

**Surveillance and Curb by Social Media**
Popular messaging application WhatsApp in an updated privacy policy has ensured its users that it couldn't listen or read to personal conversations. Despite the security of end-to-end encryptions, WhatsApp automatically collects device, location, and network information and shares it with its parent company, Facebook. It also collects user's information in case of transactions and other business and involves third parties such as Facebook. The role of social media has been very crucial in altering the data ecosystem. Online interactions strongly influence the content which is served to us in replication on social media. There is an involvement of third parties who manipulates our metadata for their advertisement purpose. This indicates the presence and control of capitalist forces on our data cum information through social media. All these have reconstructed a debate over privacy and data protection.

The Cambridge Analytica Scandal is the perfect example of how social media manipulates the private data of users. A British political firm used ambidextrous pathways to access Facebook's user's information without their consent or knowledge for political campaigning. Christopher Wylie, who was a former employee of Cambridge Analytica, exposed the digital scandal in 2018 in an interview given to The New York Times.

Data scientist Aleksandr Kogan was hired by Cambridge Analytica to develop an app "This is your digital life" which was used to collect the data. The app had a series of questions to construct psychological profiles on users. An informed consent process for people's participation was arranged by Cambridge Analytica claiming the research for an academic purpose. Through Facebook's open graph platform, the app collected the private data of not only the Facebook users but

also from their Facebook friends. In this manner, Cambridge Analytica collected the data from millions of Facebook users and used it to provide analytical assistance to the presidential campaigns of Donald Trump and Ted Cruz(NYT, 2018).This data was used as a micro-targeting technique serving customized digital messages about Trump to different voters. The digital messages in the form of Ads were classified on the basis of supporters and swing voters, which made it easy for the campaigning team to encroach into the psyche of the voters and magnetize them. This scandal has a huge global impact which strengthened the public interests in privacy.

It is not the sole instance when data from social media has been used for such psychological targeting for larger political benefits. Karthik, Jumle, Karunanithi (2020) referring to Twitter observe that Twitter and political messaging proved to be very influential for BJP's mammoth electoral success in 2014. Twitter works on a short and quick piece of communicating form that made it appear a very non-conducive medium of political messaging. On the other hand, shorter piece of communication like short news bytes was mostly preferred over detailed news due to the evolution of information ecosystem. Thus, it made twitter an instrumental tool for amplifying specific talking points related to the political agenda. In turn, Twitter got controlled by groups who were culturally and politically rooted that resulted in BJP's

dominance on a microblogging site. The other political parties who took on Twitter for their political motives were not even close to BJP in microblogging warfare. All these instances have unearthed the challenges of psychological targeting through these digital platforms for greater political benefits which is the biggest menace in front of a democratic state.

## Policy, Privacy, and Manipulation

In the 1990s, the telecom revolution and growth of IT industries introduced digital services in India that have many notable outcomes. The state identified that online service delivery as the robust means for achieving national policy goals such as financial inclusion. This goal has been facilitated by the successful implementation of *Aadhaar*. Burman (2020) noted that gradually there was the rapid proliferation of *Aadhaar*, it came under criticism for multiple reasons. It was stated that *Aadhaar* would enable the state for greater surveillance. The state will have the strongest control over the personal data of people which could be used for varied purposes. It could entitle the government in power to manipulate the data for political causes.

Further, it was claimed that the access of the biometric data collected under *Aadhaar* has been shared with third parties. The private firms ultimately gained entry into the private lives of the people through the unethical access of the metadata. All these came in the wake of the *Aadhaar*

judgment of 2018 by the apex court which clarified that no private parties will have access to the biometric data of people. As a result, *Aadhaar* was heavily criticized citing the breach of privacy as it was used for other deceptive purposes than social welfare.

In 2013, European Union proposed to consolidate its previous data protection structure through a new modified framework. It was named the General Data Protection Regulation (GDPR) which went through detailed rounds of deliberations. GDPR came into force in 2018 and incited the demand for identical comprehensive regulation in India. Simultaneously Indian government set up a committee to study the issues regarding data protection.

Ultimately in order to ensure extra control over our own data, the Draft Personal Data Protection Bill, 2018 was introduced with other reports drafted by the committee chaired by Justice B.N.Srikrishna. The draft was the basis of the final bill which was tabled into the house. This Bill is based on the landmark judgment in K.S.Puttaswamy vs. Union of India case. Section 43A of Information Technology, 2000 and IT Rules, 2011 to be replaced by this Bill. This bill provides the right to data portability, the right to confirmation and access, the right to be forgotten, and the right to correction (GOI, 2018). The Asia-Pacific Economic Cooperation Privacy Framework (APEC) and General Data Protection Regulation (GDPR) proved to be an important source for the development of the Draft Personal Data Protection Bill in India.

This bill has showered a significant amount of power to the state regarding the regulation of privacy. The state is granted the power to allow any government agencies to get exemptions in complying with the requirements of the bill. The state will also have powers to set standards with regard to additional categories of personal sensitive data. These elements of the mentioned bill paradoxically quashed the fundamental values of privacy.

Alternately the Snooping Orders, 2018 by the Union Ministry of Home Affairs magnified the privacy debates nationally. Information Technology Rules, 2009 put forward the procedural regulation for digital surveillance through the law enforcement agencies (LEA). Since the LEAs were not elucidated, in 2018 The Ministry of Home Affairs has issued a notification that has designated ten agencies as competent law enforcement agencies (LEA) under section 69 of the IT Act. Section 69 of the IT Act provides them all the powers to intercept, tap, and decrypt personal data on computers. This step by the Ministry of Home Affairs is vital for transforming India into a surveillance state. When privacy is established as a fundamental right, this snooping order by the government went against the core value of privacy. The state has categorically failed to establish a legal regime that could address risks of technological

developments and intersections between civil rights.

## Conclusion

Encroachments of third parties in the case of Social Media, *Aadhaar*, etc. are unacceptable and against the ethos of the constitution. In European Union, WhatsApp's new policies are inapplicable. General Data Protection Regulation (GDPR) prohibits businesses from collecting personal data. In this light, India needs to establish a strong legal system that could curtail the influence of third parties. On the other hand, there are Central Monitoring System (CMS), NATGRID, NETRA, etc. which has been legally authorized for surveillance. The Central Monitoring System (CMS) came to force under the regime of UPA in 2009. The prime aim of the system was to monitor the communications on the telephones and the internet. This system has the right to process interceptions to trace down unlawful acts. On the other hand, the Centre for Artificial Intelligence & Robotics, a lab of Defence Research and Development Organization (DRDO) developed Network Traffic Analysis (NETRA). This is a distinguished surveillance system developed to face internal and external attacks in the country. It has nuanced surveillance on all the social media sites, phone calls, emails to detect suspicious verbal and code language for the purpose of exploring the potential national threat. The attack of 26/11 has raised questions on the entire national security system in India. It has exposed many security loopholes. In the light of this attack, National Intelligence Grid (NATGRID) came into force. It is an integrated system that gathers the data and patterns of banking, telephonic communication, and immigration entry-exit of a suspect from various other agencies. (Xynou and Hickok, 2015). The above security agencies are instrumental in detecting suspicious activities which could lead to a serious threat. With the help of supremely advanced technologies, these central bodies are pivotal for maintaining national security and combat terrorism. Therefore surveillance conducted by these bodies is very important to ensure peace and harmony in society. At the same time, it is also essential and challenging for these agencies to avert the breach of privacy of the citizens. In December 2020, The Delhi High Court issued a notice to the center and directed them to stop collecting public data through their three surveillance projects. CMS, NATGRID, and NETRA, these three main surveillance systems function for the larger national benefits. Therefore, it is strongly required to equilibrate between legitimate concerns of the state and the privacy of an individual. Amidst the debate over privacy, technology, policy interventions, surveillance, it is challenging for the state to sensitively balance public security and protect individual's privacy as a fundamental right. While balancing between the legitimate concerns of security and the

privacy values, the state should categorically frame their equitable aims for national security and their nature cum scope. The aims could include protection of national security, safeguarding from internal threats, etc. The state should have a strong mechanism to confine the national security surveillance system to use private data only for public security purposes. This will not only maintain the privacy of an individual but also cement the dignity, which is the fundamental right of Indian citizens. Secondly, there should be a comprehensive regulatory framework by the state that includes transparent encryption technologies, regulation for the protection of databases, data safety, proper collection and classification of data, etc.

Conclusively, rightful public policies need to be formulated which protect both private and public interests. It will also be the significant role of the policymaker to bring center, state, and *panchayat raj institutions* into the play constructively for the meaningful implementation of the above steps to deal with privacy and technology concerns.

## References

1. Burman,A (2020). Will India's Data Protection Law Protect Privacy and Promote Growth? Carnegie India. pp. 3-21
2. Karthik, Jumle, Karunanithi (2020). BJP's Twitter Experiments and Tamil Resilience. Economic and Political Weekly. Vol.55, Issue No.44.
3. Nelson, Lisa (2004). Privacy and Technology: Reconsidering a Crucial Public Policy Debate in the Post-September 11 Era. Public Administration Review, May - Jun., 2004, Vol. 64, No. 3. pp. 259
4. Xynou, M and Hickok (2015). Security, Surveillance and Data Sharing Schemes and Bodies in India. The Centre for Internet & Society. Pp. 2-12.
5. https://dataprotectionindia.in/act/
6. https://meity.gov.in/writereaddata/ files/Personal_Data_Protection_Bill, 2018.pdf
7. https://www.epw.in/engage/article /what-enables-state-disregard-right
8. https://www.epw.in/engage/article /privacy-manipulation-social-media-political-discourse
9. https://www.nytimes.com/2018/04 /04/us/politics/cambridge-analytica-scandal-fallout.html

# COVID19 PANDEMIC CRISIS CRIPPLES INDIAN TOURISM WITH REFERENCE TO ASSAM'S TOURISM

**SEBIKA SAHA**

*Independent Researcher, Department of Commerce*
*K.R.B. Girls College, Guwahati, Assam*

**RAJBIR SAHA**

*Lecturer, Department of Commerce, K.R.B. Girls College, Guwahati, Assam*

## Abstract

*Tourism is considered to be an emerging inter-disciplinary subject, thus an academic and research work on this subject enriches the existing inventory of knowledge and available literature. Tourism helps in the creation of national integration, international understanding, employment opportunities, removal of regional imbalance, support of local handicraft, cultural activities, and act as a source for revenue collection. However, it is a matter of deep concern for all the stakeholders involved with the tourism industry, that due to the Covid19 pandemic, the tourism sector have been affected the worst. Covid19 is spreading at an unprecedented rate from the beginning, not only in the whole world but at India too and emerged as a biggest health threatening, the world has faced in the modern times. This paper aims to study the issues in India and the impact on Indian tourism sector, that have been greatly affected by the outbreak. India ranks among the 7th largest country in the world, with rich tourism potentialities and resources, contributes to country's GDP. The demand of the hour, is to take early measures to overcome the present challenges faced by analyzing the long term impacts at the foremost.*

***Keyword****: tourism, covid19, pandemic, impact.*

## Introduction

In the beginning of the 21st century, tourism have appeared as a new dimension of the modern society, playing an important role in the socio-economic development of any country. A service oriented industry, regarded as an engine of economic development can be considered as the largest and dynamic developing sector, in external economic activities, its high growth of development pace considerably contributes in earning foreign currency, boost in infrastructure management and educational system. Tourism creates a winning value proposition for self talent, elevate talent management to a burning corporate priority, complement with internal talent, looking for conventional source of talent which are essential for systematic of a country in general and of state in particular. But the impact of biological disaster called corona virus disease Covid19 threat in the month of December, 2019 originated from China's Hubei province in Wuhan city in the continually adversely affected

more than 150 countries and claimed more than 50,000 lives globally. In just a series of weeks, over 1,00,000 of confirmed cases reported and thousands of deaths globally. On January 30, 2020, the World Health Organization (WHO) renamed as Covid19 and declared the outbreak as 'public health emergency of international concern". At the global level, scientists started to work rapidly in order to elucidate the characteristics of virus like transmission, death rate and origin (Perlman, 2020). Government of several countries, as early as possible started to work to handle the situation by imposing strict lockdown, taking appropriate measures and also by communicating precautionary information regarding Covid19, those developed economies, medically advance countries are not also been deprived themselves from the outbreak. After China the most worst hit country is Italy. Europe, too became the epicenter of Covid19. India, have also gone through a series of lockdown consequently facing challenges the tourism industry.

## Objectives of the Study
To study the impact of Covid19 on Indian Tourism with reference to Assam's tourism.

## Review of Literature
**Patel et al. (2020)** in their research study the objective taken was to measure the impact of corona virus on Indian tourism and showcased the ultimate damage created on tourism as well as economic slowdown, the impact is seen on travelling agencies, sales volume and the hotel services being stopped due to lockdown imposed by the government to curb the spread of virus. The impact will continue for some time more and with concern in coming days.

**Jennings (2020)** in his article mentioned about the impact of corona virus on tourism strikes more on Southeast Asia, because of its close economic links with China, which usually peaks during lunar new year season. A quite negative shock have been seen on tourism for at least the first quarter, due to entry restrictions. The shops, restaurants and public events are burdened with stock of non-perishables of staying indoors.

**Singh (2020)** in her article she discussed the impact of corona virus on Indian tourism, the industry would expect a job loss, decline in the occupancy rate of hotel bookings, with international and domestic travel on halt, the demand have substantially declined.

## Research Methodology
The present paper is in the form of an explanatory and descriptive study. To achieve the objectives of the study, secondary based literature have been considered to analyze the data available. Though, research based study are limited in this field, as the Covid19 disease emerged, in the late December, 2019, thus making it hard to get research studies based on the

present study. For the study various media reports, articles, health advisories and reports, publications of the Ministry of Tourism, Government of India have been considered to suggest some ways to revive the industry and at last to arrive at a conclusion, based on the available sources.

## Discussion and Analysis
## Indian Tourism Industry

India is the birthplace of the four religions of the world namely Hinduism, Buddhism, Jainism and Sikhism, having total 38 world heritage sites, attracts a favorable destination of tourist from all over the world. India's foreign tourist arrival is also increasing. (Ministry of Tourism, 2019). In 2017, 10.04 million foreign tourists arrived and in 2018, 10.56 million tourists arrived with 5.2 % increase.(IBEF, 2019). Travel and tourism sector have contributed to India's GDP, would be expect to increase an amount from total Rs 15, 24,000 crore (US$ 234.03 billion) in 2017 to an amount of Rs 32, 05,000 crore (US$ 492.21 billion) in 2028(IBEF, 2019). From the sector, total earning stood in India at US$ 28.6 billion in 2018 and is whooping target to reach US$ 50 billion by 2022. The number of foreign tourist arrivals for medical purpose is also increasing (Ministry of Tourism, 2019). Provided that, the data and facts regarding the studies clearly indicate that India is ready to carry forward the tourism industry to a next level, which will make accelerate the growth of tourism

industry. Now the world tallest statue is also found in India, known as statue of liberty, inaugurated in 2018 and has emerged as the most favorite tourist spots of India. Indian tourism industry having diverse accommodation sector to accommodate the need of travelers including national and international luxurious hotel chains to home stay schemes and known for its hospitality worldwide. Meditation, yoga, adventure tourism are also one of the emerging trends under tourism industry as Indian Vedas contains many philosophies for yoga and meditation and foreigners across the world found India as suitable destination for yoga and meditation. India's north, east, west and south parts known for its diversity in terms of climatic conditions, flora & fauna, cultural values and lifestyles. At the end of 2019 India tourism industry was confident to continue with its fast pace of growth without any concern of threat, that might pose to Indian tourism industry but now situation has been changed due to Covid19 crisis in India and globally. Tourism product is a perishable product which cannot be stored and sold later, this feature of tourism product push tourism industry in to heavy loss in terms of poor revenue generation. As of now, this could be, one of the worst crises to ever hit the Indian tourism industry. When the news of the virus start picking up from November itself, the cancellation percentage started going up in this segment exponentially and could reach

a peak of almost 80% (UNCTAD, 2020) in the month of March at prime Indian locations. The value of risk from this segment will be in multiples of tens of thousands of crore. Tourism industry is in threat globally and will also affect employment adversely. Indian tourism industry is source of employment, livelihood for many people who are directly and indirectly linked to tourism industry.

## Covid19 and Assam's tourism sector - Impact

More specifically, the business enterprise trade in state, a significant industrial and business enterprise hub, is one in all the worst hit within the country. this can be as a result of Assam's business enterprise trade has been suffering 5 even before the pandemic was fully result. In Gregorian calendar month 2019, the trade took successful from the Citizenship modification Act protests that crystal rectifier to many curfews and bouts of violence. From Oct 2019 to Apr 2020, the business enterprise and welcome trade in state was battered severely, and has slowly become a shadow of itself. This, many folks concern, could lead to huge jobs losses. Concerning ninetieth individuals operating in many business enterprise businesses could lose their jobs, which might be avoided if one thing forceful is completed by the govt. Sources of living across Northeast isn't secured. No one is definite concerning the depth of impact this pandemic can leave on the lives of individuals across state and Northeast. The Covid19 pandemic may lead to a disabling blow to the Indian travel and business enterprise trade, impacting all its geographical segments –inbound, departing and domestic and most business enterprise verticals –leisure, adventure, spiritual, heritage, company and niche segments. the complete business enterprise worth chain across hotels, travel agents, tour operators, destinations, restaurants, family diversion venues and land, air and sea/river transportation has been hit. In North Malay Archipelago, with giant scale cancellation of travel plans, by each foreign and domestic tourists, there has been a drop by each incoming and departing tourists. This downslide started in 2019 Gregorian calendar month throughout the CAB/CAA movement and step by step once things started recovering, the law and order scenario in Meghalaya became a deterrent to the flow of tourists. currently with Covid19 pandemic it's sort of a nail within the coffin for the business enterprise sector during this region. With the clean up and cut down expected to last for a amount stretching till Oct 2020, and maybe get to traditional levels by finish of 2020, it's evident that the business enterprise trade in North East generally and state specifically, that has been within the slump since Gregorian calendar month 2019, the revenue loss are going to be for a amount of virtually twelve 6 years state had continuously been a entree to North East, and aside from visits to

Kaziranga and Kamakhya, Guwahati was serving as a transit purpose for tourists visiting Meghalaya and Arunachal Pradesh. However lately, because of the aggressive promoting and promotion of business enterprise in state, loads of tourists were specifically visiting state. numerous locations known were promoted and journey business enterprise was slowly turning out as section} segment. Tour operators had started promoting places like Sualkuchi, Rongtholi, Hajoetc and this successively crystal rectifier to growth of home stays, promotion of ethnic cooking and promotion of culture and hand crafted things. There square measure more or less a hundred registered tour operators in state with a median worker size of six individuals and that they own a median of 4 vehicles. This ends up in AN addition of another four drivers engaged for the vehicles. Most of the vehicles are taken on loan and therefore there's a liability to pay the EMI. With vast cancellations and no revenue, covering the fixed charge as well as pay and EMI itself could be a terribly massive challenge. There are more or less 600-700 Gypsys for visiting the sanctuaries in Kaziranga, Manas and Pobitora and in Kaziranga alone there square measure five hundred gypsy's, every gypsy would once more be having a driver and a guide. it's to be noted that together with the registered tour operators, there are an oversized range of unregistered tour operators, on-line travel platforms, aggregators, different service suppliers, all concerned during this business enterprise area. Realizing the potential of business enterprise trade, some schools have started business enterprise credential courses and therefore the students passing out from these schools started obtaining absorbed within the business enterprise trade. The impact on the business enterprise trade also will have a spiralling have an effect on on numerous different service suppliers within the eco-system. Seeing the large potential within the business enterprise sector, variety start-ups had come back up during this sector and presently two hundredth of the start-ups from the region square measure business enterprise connected. Looking at the foremost challenges that entrepreneurs from this sector face ,it is seen problems like burden of paying the EMI's for loan, covering the fastened expenses like pay, rent etc square measure most important ones, because the trade has terribly restricted chance for revenue generation within the next six months. whereas entrepreneurs square measure gazing potential opportunities like distinguishing scope of native business enterprise and targeting incoming tourists, they're conjointly adopting methods on minimizing continual price and investment and focusing a lot of on digital promoting.

Some expectations from the govt. embrace the following:

a. Short term interest free loan for reconstruction business

b. Doubling the present order of payment facilities for the trade to avoid mass layoffs

c. Providing interest free moratorium on existing loans for 9 months

d. Deferment of all statutory compliances and State merchandise and Services Tax (SGST) for twelve months and removal of fees for any future licenses/permits .

Tourism and welcome trade is incredibly closely associated with revenue and employment generation and therefore a special bail out package for the whole trade is required. the amount issue for all of them is money. Their revenues have gone zero, their vendors have stopped paying them and assets square measure fully frozen. Even once the internment is removed, the recovery isn't getting to be nightlong. the requirement of the hour is to possess a SME stabilization fund. Entrepreneurs conjointly have to be compelled to discover what the globe wants and not what they accustomed manufacture. The MSMEs need to close around trade associations. one in all the explanations 8 why the IT trade has been therefore undefeated is as a result of they need unionized NASSCOM. The crisis is additionally a large chance. Entrepreneurs will strategize and realize new ways in which of doing business. people who will survive within the medium term and adapt square measure getting to flourish.

## Conclusion

Severe impacts from Covid19 are reducing hotels booking, airlines booking, cancellations of events, reduction of staff as a cost cutting measures and risk to airlines, hotels, travel agencies jobs in the near future as the revenue generated by tourism industry will be reduced. Half of the revenue declined in 2020 as compare to the previous year, however, despite severe cuts in business and predictions that normal travel patterns would take years to return. To handle this situation and for the uplift of tourism industry government should come forward. Government must give certain relaxation on taxes imposed on tourism industry, or to provide certain soft loans with minimum interest rates and must issue additional funds for the betterment of tourism industry in the near future.

## References

1. Business Today (2020). COVID-19 impacts. Retrieved from https://www.Businesstoday.in/current/economy-politics/coronavirus--impact-makemytripsfounders-to-draw-zero-salary-top-brass-to-take-50-cut/story/399281.html.

2. India Brand Equity Foundation. (2019). Indian tourism and hospitality industry analysis. Retrieved from https://www.ibef.org/industry/indian-tourism-andhospitality-industry-analysis-presentation.

3. Ministry of Tourism, India (2019). Tourism statistics. Retrieved from http://tourism. gov.in/sites/default/files/Other/India%20Tourism%20Statistics%20at%20a%20Glance%2020pdf

4. Ministry of Tourism, India (2019). Development of medical tourism. Retrieved from http://tourism.gov.in/sites/default /files/usq%20449%20for%2025062019.pdf.

5. Patel. P. K, Kharoliwal. S, Sharma, J & Khemariya, P. (2020). The Effects of Novel Corona Virus (Covid-19) in the Tourism Industry in India, International Journal of Engineering Research & Technology, 9 (05), 780 – 788.

6. Jennings, R. (2020). Corona virus Strikes Tourism, Factories, Consumption around Southeast Asia.Voice of America, Available at https://www.voanews.com/science-health/coronavirus-outbreak/coronavirus-strikes-tourism-factories-consumption-around.

7. Singh, N. (2020). The Impact of Covid-19 on Travel & Tourism Industry in India and its future. Retrieved from tourmyindia.com/blog/impact-of-covid-19-on-travel-tourism-industry/.

8. The Economic Times (2020). Retrieved from https://m.economictimes.com/news/international/business/international-tourism-to-plunge-up-to-30-due-to-virus-to-virus-WTO?cms.

9. World Health Organization, India (2020). Novel Corona virus Situation Report-1.Retrieved from https://www.who.int/docs/default-source/wrindia/india-situationreport-1.pdf.

10. World Health Organization (2020). Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Retrieved from https://www.who.

11. World Travel and Tourism Council (2020). COVID-19 impact. Retrieved from https://www.wttc.org/about/media-centre/press-releases/press-releases/2020/coronavirus-puts-up-to-50-million-travel-and-tourism-jobs-at-risk-says-wttc/.

12. https://www.eastmojo.com/others/2020/08/23/amid-covid-19-assams-tourism-industry-screaming-for-govt-aid/

13. https://www.insidene.com/covid-19-pandemics-crippling-effect-on-assam-tourism/

# A STUDY ON MUTUAL FUND PERFORMANCE:
# A FAMA-FRENCH MODEL APPROACH

**DHYANVI SHAH**
*Student, SJPI-NICM (MBA-Finance)*
*Shri Jairambhai Patel Institute of Business Management (NICM), Gujarat*

**TARUN JODHVANI**
*Student, SJPI-NICM (MBA-Finance)*
*Shri Jairambhai Patel Institute of Business Management (NICM), Gujarat*

**VIKAS MER**
*Student, SJPI-NICM (MBA-Finance)*
*Shri Jairambhai Patel Institute of Business Management (NICM), Gujarat*

## Abstract

*Mutual fund is nowadays one of the most important and attractive choices of investment due to its characteristics of lower risk and higher returns as compared to investment in individual stocks. Hence, it becomes vital to measure the performance of mutual funds from time to time in order to enable the investors to make informed decisions. There are many techniques developed to measure the performance of mutual funds such as arithmetic and geometric returns, CAGR returns, etc. But very few previous studies have focused on the Fama and French Model to find out mutual fund performance. This study focuses on 15 popular mutual fund schemes of India and using the Fama-French approach and the monthly returns database of each scheme from 2010 to 2019. The results show that Axis Blue Chip Fund is the most profitable option followed by ICICI Prudential Blue Chip Fund and HDFC Top 100 Fund, respectively.*

## Introduction

A Mutual Fund is type of financial vehicle made up of a pool of money collected from many investors to invest in securities, like stock, bonds, money market instruments, and other assets. The Security Exchange Board of India Regulation, 1996 defines a mutual fund as a "A fund established in the form of a trust to raise money through the sale of units to the public or a section of the public under one or more scheme for investing in a security, including money market instruments. "[Sebi (Mutual Funds) Regulations, 1996)].

Mutual Funds pool money from the investing public and use that money to buy other securities, usually stocks and bonds. The value of the mutual fund company depends upon the performance of the securities it decides to buy. So, when you buy a unit or share of mutual fund, you are a buying a performance of its portfolio or more precisely, a part of the portfolio's value.

Since the repeal of the UTI Act, 1963, UTI was divided into separate entities. The first one is Specified undertaking of UTI with AUM of under Rs. 29,835 as at the end of January 2003. It functions under AM administrator and rules framed by Government of India and does not comply with the SEBI's (Mutual Fund) Regulations. (UTI Act, 1963)

The industry has now entered the phase of consolidation and growth with recent mergers among different private sector fund house. A takeover of Lotus India Mutual Fund (LIMF) by Religare Mutual Fund in 2009 in one of the major consolidations in the modern era of Mutual Fund industry in India. Morgen Staley chose to hand over its mutual funds scheme to HDFC Asset Management Company in late 2013. It was widely regarded as a welcome move as it helped HDFC to expand its user base. Another noticeable merger was announced on March 22nd, 2016 as Edelweiss Asset Management (EAM) declared the purchase of domestic assets of JP Morgan Asset Management India (JPMAM). The Combined AUM of both the companies is estimated to approximately around INR 8,757 crores. Last year, Goldman Sachs Mutual Fund handed over its assets to Reliance Capital Asset Management Company, which were initially taken over from Benchmark AMC. ING Investment Management sold its Mutual Funds business to Aditya Birla Sun Life Asset Management. Hence, over the last couple of years, the industry has seen a degree of consolidation taking place (Fincash).

The result suggests that the DEA methodology for evaluating the mutual fund performance may usefully compliment the traditional index. The DEA approach, indeed, provides some additional information that may be useful in carrying out a careful comparative analysis. (Antollena Basso and Stefania Funari, 2001). Mutual funds have different performances in different time scales. In short cycle, funds tend to undertake market system risk to make excess profit; in long cycle and trend, they tend to use other factors to make excess profit. (Haoyu Wang, Junpeng Di, Zhaojun Yang and Qing Han, 2020).

Studies held between 2000 to 2010 in UK suggest that high variability even for different measures from the same group of measures and for measures that correlated strongly with the Sharpe ratio (PilarGrau-Carles, Luis Miguel Doncel and Jorge Sainz, 2017). One of the other studies suggests that the fund managers who choose to increase portfolio concentration realize higher subsequent risk-adjusted returns. On average, a fund that increases its concentration by one standard deviation experiences an annualized increase in risk-adjusted return of 24 basis points. (Jon A. Fulkerson and Timothy B. Riley, 2019).

## Literature Review

Several studies have also looked on the performance of mutual fund and it was conducted in the different countries.

Miles Livingston, Ping Yao, Lei Zhou (2019) studied on the volatility of mutual fund performance by using data for equity mutual funds from 1991 to 2012 in United States. The studies have overlooked the fact that a high degree of active management magnifies the extremes of performance. As a result, it was found that fund characteristics, such as the expense ratio and the turnover ratio, not only affect the average fund performance, but also the variability in performance. This heterogeneity in fund performance has been over looked in prior research with conditional mean based single equation regression models of fund performance.

Similarly, another study on Ethical strategy focus and mutual fund management: Performance and Persistence was directed by Juan Carlos Matallín-S aez, Amparo Soler Domínguez, Emili Tortosa Ausina, Diego Víctor de Mingo-L opez (2018) in Spain. The aim of study is to analyse whether managers, practitioners and individual investors could obtain higher risk adjusted returns by allocating their investments to funds that integrate specific levels of socially responsible criteria in their portfolio. They had taken Equity Socially Responsible Mutual Funds as variables. They found that the financial performance of sample of mutual funds around the world that integrate different level of SR attributes in their investment portfolio and the most of mutual funds achieving higher scores in SR attributes, especially those investing in less developed areas, experience lower overall performance than other similar funds that focus less on their SR strategies.

In United States, John C. Adams, Takeshi Nishikawa, and Ramesh P. Rao (2016) has carried out the study on Mutual Fund Performance, Management Teams, and Boards. The purpose of the study is to prove that the benefits of team managed mutual funds is more than the individual managed funds. As a result, they found that the e vast literature on team management illustrates the potential benefits such as increased productivity and better decision making are believed to lead teams to enhanced performance.

Haoyu Wang, Junpeng Dib, ZhaojunYanga, Qing Hanb (2019) has analysed the mutual fund performance in three different time scale short cycle, long cycle and trend. They have used Ensemble Empirical Mode Decomposition for this study. They found that the mutual funds have different performances in different time scales. In short cycle, funds tend to undertake market system risk to make excess profit; in long cycle and trend, they tend to use other factors to make excess profit.

Laura Andreu Sánchez, Juan Carlos Matallín Sáez, José Luis Sarto Marzal (2018) studied investment decisions based on portfolio holdings and measures the value added from different sources of performance such as past return strategies, security selection, market timing in Spain. They

have taken bond mutual fund as variable. They found that the abnormal performance of mutual funds has positive and negative values, although statistical significance is scarce. On average, the pre-expense performance average is positive but economically irrelevant.

Another study of mutual fund performance is based on Ranking. It was conducted by Pilar Grau Carles, Luis Miguel Doncel, Jorge Sainz (2018) in Spain. The main objective of study is to examine the stability of mutual funds in ranking. The study shows that the chosen period spanned the global financial crisis, which led to a period of great instability. It observed great variability in the rankings across different measures and high variability even for different measures from the same group of measures and for measures that correlated strongly with the Sharpe ratio.

Jon A. Fulkerson, Timothy B. Riley (2019) studied on Portfolio concentration and mutual fund performance in United States. The aim of the study was that when the fund manager increases their portfolio concentration, whether it has any impact on the mutual fund performance. They had taken U.S equity mutual funds as variables. And the study found that mutual fund managers must balance generating alpha with limiting idiosyncratic volatility. Increases in portfolio concentration can give additional weight to managers' best investment ideas and increase the expected alpha of the fund, but increases in concentration can also be expected to increase idiosyncratic volatility.

Andrew Clare, Nick Motson, Svetlana Sapuric, Natasa Todorovic (2008) investigated that whether the change of fund manager does any impact in mutual fund performance. The results suggest that UK fund management companies have been relatively successful in replacing bad managers with better managers.

## Research Methodology
### Objectives

The primary objective of the study was to measure the mutual fund performance using the Fama and French Model. The secondary objectives were to find out the and compare the returns of individual MF schemes, to help the investors in making informed decisions while taking investment decisions, and to find any inconsistencies in the traditional approach of finding out performance of MF and using the Fama and French Model.

### Sample

The sample size includes the most popular 15 schemes of Indian mutual funds industry. The list of mutual fund schemes taken into consideration is as follows:

| S. No. | Name of the schemes |
|--------|---------------------|
| 1 | Aditya Birla Sun Life Active Debt Multi Cap Fund |
| 2 | Axis Blue chip Fund |
| 3 | Baroda Large Cap Fund |
| 4 | BNP Paribas Large Cap Fund |
| 5 | Edelweiss Large Cap Fund |
| 6 | Essel Large Cap Equity Fund |
| 7 | Franklin India Blue chip Fund |
| 8 | HDFC Top 100 |
| 9 | HSBC Large Cap Equity Fund |
| 10 | ICICI Prudential Blue chip Fund |
| 11 | IDBI India Top 100 Equity Fund |
| 12 | Indiabulls Blue chip Fund |
| 13 | Invesco India Large Cap Fund |
| 14 | Kotak Blue chip Fund |
| 15 | LIC MF Large Cap Fund |

## Data Collection

The data collection was based purely on secondary data approach. The Fama-French factors data was collected from the website of Fama French and Momentum Factors: *Data Library for Indian Market*. The Mutual Fund Return data is collected from the website of *advisorkhoj*.

## Research Method

The first and foremost step was to identify the popular mutual fund schemes and collect the information about their historical returns. The data was adjusted and standardized for monthly returns of each scheme. The regression and ANOVA tests were performed on each fund's performance. For calculating Alpha, the geometric mean of every factor was found out. Finally, the rank was given to each scheme according to their performance.

## Data Analysis
## Research Model

Fama French Model: The Fama-French three factor model is the extension of the Capital Asset Pricing Model (CAPM). It was developed by University of Chicago professors Eugene Fama and Kenneth French.

The Fama-French Model aims to describe stock returns through three factors:

Market Risk,

- The outperformance of small cap companies relative to large cap companies, and
- The outperformance of high book market value companies versus low book market value companies.

## The Fama-French Three Factor Model Formula

$$r = rf + \beta (rm\text{-}rf) + \beta (SMB) + \beta (HML)$$

where,

| | |
|---|---|
| r | = Expected rate of return |
| rf | = Risk free rate |
| $\beta$ | = Factor's coefficient |
| (rm-rf) | = Market risk premium |

SMB = Historical excess return of small cap companies over large cap companies

HML = Historical excess return of high book market value companies versus low book market value companies

## Market Risk Premium

Market Risk Premium is the difference between the expected return of market and the risk free rate. It provides an investor with an excess return as compensation for the additional volatility of returns over and above the risk free rate.

## SML (Small Minus Big)

Small Minus Big is a size effect based on the market capitalization of a company. SMB measures the historical excess of small cap companies over big cap companies. Once SMB is identified, its beta coefficient can be determined via linear regression. A beta coefficient can take positive values as well as negative values.

## HML (High Minus Low)

High Minus Low is a value premium. It represents the spread in return between companies with high book market value and companies with low book market value. Like the SMB factor, once HML factor is identified, its betacoefficient can be by found by linear regression. The HML beta coefficient can take positive values as well as negative value.

## Calculation of Fund Performance

| Name of Scheme | Risk free return | Market risk coefficient | Market risk premium | Size risk coefficient | Size risk premium | Value risk coefficient | Value risk premium | R = rf + β (rm-rf) + β (SMB) + β(HML) | α = GM – Return |
|---|---|---|---|---|---|---|---|---|---|
| Aditya Birla Sun Life Active Debt Multi Cap Fund | 0.07678 | 0.00928 | 0.01231 | 0.00617 | 0.01154 | -0.00581 | -0.06017 | 0.07731 | -0.00053 |
| Axis Blue chip Fund | 0.15776 | -0.20002 | 0.04068 | 0.80843 | -0.00393 | 0.29043 | -0.06766 | 0.12679 | 0.031 |
| Baroda Large Cap Fund | 0.10096 | 0.14992 | 0.04068 | 0.3665 | -0.0039 | 0.07151 | -0.0676 | 0.10078 | 0.00018 |
| BNP Paribas Large Cap Fund | 0.06738 | 0.15163 | 0.04068 | 0.01043 | -0.00394 | -0.08501 | -0.06766 | 0.07926 | -0.01188 |
| Edelweiss Large Cap Fund | 0.13316 | 0.14802 | 0.04068 | 0.14366 | -0.00394 | -0.0319 | 0.06766 | 0.14078 | -0.00762 |
| Essel Large Cap Equity Fund | 0.11934 | 0.08996 | 0.04068 | 0.16259 | -0.00394 | 0.01180 | -0.06766 | 0.12156 | -0.00222 |
| Franklin India Blue chip Fund | 0.11232 | 0.02752 | 0.04068 | 0.24445 | -0.00394 | -0.0123 | -0.06766 | 0.1133 | -0.00099 |
| HDFC Top 100 | 0.10549 | -0.0314 | 0.01231 | 0.30763 | 0.01154 | 0.18241 | -0.06017 | 0.09767 | 0.00782 |
| HSBC Large Cap Equity Fund | 0.11864 | 0.11100 | 0.04068 | 0.23367 | -0.00394 | -0.00171 | -0.06766 | 0.12235 | -0.00371 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ICICI Prudential Blue chip Fund | 0.13995 | -0.20003 | 0.04068 | 0.80843 | -0.00394 | 0.29043 | -0.06766 | 0.10898 | 0.03097 |
| IDBI India Top 100 Equity Fund | 0.1227 | 0.2015 | 0.0406 | 0.1816 | -0.0039 | -0.0740 | -0.0676 | 0.13525 | -0.01249 |
| Indiabulls Blue chip Fund | 0.12603 | 0.05937 | 0.04068 | 0.22937 | -0.00394 | -0.01168 | -0.06766 | 0.12833 | -0.0023 |
| Invesco India Large Cap Fund | 0.13980 | 0.09428 | 0.04068 | 0.23470 | -0.00394 | -0.03362 | -0.06766 | 0.14498 | -0.00518 |
| Kotak Blue chip Fund | 0.13355 | 0.13684 | 0.04068 | 0.23992 | -0.00394 | -0.03231 | -0.06766 | 0.14036 | -0.00681 |
| LIC MF Large Cap Fund | 0.12342 | 0.17295 | 0.04068 | 0.15354 | -0.00394 | -0.08271 | -0.06766 | 0.13545 | -0.01203 |

## Findings
## Ranking of the Schemes in Accordance with Fama and French Model

| No | Scheme Name | Return (%) | Rank |
|---|---|---|---|
| 1 | Axis Blue chip Fund | 3.1 | 1 |
| 2 | ICICI Prudential Blue chip fund | 3.097 | 2 |
| 3 | HDFC Top 100 | 0.782 | 3 |
| 4 | Baroda Large Cap Fund | 0.18 | 4 |
| 5 | Essel Large Cap Equity Fund | -0.02 | 5 |
| 6 | Aditya Birla Sun Life Active Debt Multi Cap Fund | -0.05 | 6 |
| 7 | Franklin India Blue chip Fund | -0.1 | 7 |
| 8 | India Blue chip Fund | -0.23 | 8 |
| 9 | HSBC Large Cap Equity Fund | -0.37 | 9 |
| 10 | Invesco India Large Cap Fund | -0.52 | 10 |
| 11 | Kotak Blue chip Fund | -0.68 | 11 |
| 12 | Edelweiss Large Cap Fund | -0.76 | 12 |
| 13 | BNP Paribas Large Cap Fund | -1.19 | 13 |
| 14 | LIC MF Large Cap Fund | -1.2 | 14 |
| 15 | IDBI India Top 100 Equity Fund | -1.25 | 15 |

## Conclusion and Recommendations

Most of the previous studies (to the best of authors' knowledge) have either focused on the market risk premium in isolation or on the CAGR returns to find out mutual fund scheme performance. But this study used the approach of Fama and French Model to identify the monthly returns of the most popular 15 mutual fund schemes in India. Axis Blue Chip Fund is the scheme which generated the highest returns in past, followed by ICICI Prudential Blue chip fund and HDFC Top 100.In the today's fast-paced world, investors mostly tend to rely on the herd or blindly follow their advisors to make investment decisions. Using the detailed analysis,

will help the investors to make informed decisions and make systematic investment, rather than gambling.

## References

1. Fulkerson, J. A., & Riley, T. B. (2019). Portfolio concentration and mutual fund performance. Journal of Empirical Finance. https://doi. org/10. 1016/j.jempfin.2019.01.006

2. Livingston, M., Yao, P., & Zhou, L. (2019). The volatility of mutual fund performance. Journal of Economics and Business. https://doi.org/10. 1016/j.jeconbus.2019.02.001

3. Matallín-Sáez, J. C., Soler-Domínguez, A., Tortosa-Ausina, E., & de Mingo-López, D. V. (2019). Ethical strategy focus and mutual fund management: Performance and persistence. Journal of Cleaner Production.
https://doi.org/10.1016/j.jclepro.2 018.12.130

4. Basso, A., & Funari, S. (2001). A data envelopment analysis approach to measure the mutual fund performance. European Journal of Operational Research. https://doi.org/10.1016/S0377-2217(00)00311-8

5. Parida, S., &Teo, T. (2018). The impact of more frequent portfolio disclosure on mutual fund performance. Journal of Banking and Finance. https://doi.org/10.1016/j.jbankfin. 2015.01.018

6. Adams, J. C., Nishikawa, T., & Rao, R. P. (2018). Mutual fund performance, management teams, and boards. Journal of Banking and Finance. https://doi.org/10.1016/ j.jbankfin.2016.09.006

7. Grau-Carles, P., Doncel, L. M., &Sainz, J. (2019). Stability in mutual fund performance rankings: A new proposal. International Review of Economics and Finance. https:// doi.org/10.1016/j.iref.2018.01.018

8. Mateus, I. B., Mateus, C., & Todorovic, N. (2019). Review of new trends in the literature on factor models and mutual fund performance. In International Review of Financial Analysis. https://doi.org/10.1016/j.irfa.2018 .12.012

9. Andreu, L., Matallín-Sáez, J. C., & Sarto, J. L. (2018). Mutual fund performance attribution and market timing using portfolio holdings. International Review of Economics and Finance. https://doi.org/10. 1016/j.iref.2018.02.003

10. Chen, C. R., & Huang, Y. (2011). Mutual fund governance and performance: A quantile regression analysis of morningstar's stewardship grade. Corporate Governance: An International Review.
https://doi.org/10.1111/j.1467-8683.2011.00858.x

11. Wang, H., Di, J., Yang, Z., & Han, Q. (2020). Assessment of mutual fund performance based on

Ensemble Empirical Mode Decomposition. Physica A: Statistical Mechanics and Its Applications. https://doi.org/10.1016/j.physa.2019.122804

12. Clare, A., Motson, N., Sapuric, S., & Todorovic, N. (2014). What impact does a change of fund manager have on mutual fund performance? International Review of Financial Analysis. https://doi.org/10.1016/j.irfa.2014.08.005

13. Hsieh, H. P., Tebourbi, I., Lu, W. M., & Liu, N. Y. (2020). Mutual fund performance: The decision quality and capital magnet efficiencies. Managerial and Decision Economics. https://doi.org/10.1002/mde.3143

14. Moneta, F. (2015). Measuring bond mutual fund performance with portfolio characteristics. Journal of Empirical Finance. https://doi.org/10.1016/j.jempfin.2015.03.012