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The Catalyst-Journal of Management is a bi-annual journal brought out by the School of Management Studies, Baddi University of Emerging Sciences and Technology (BUEST). The Catalyst-Journal of Management (CJM) is committed to publish scholarly articles having empirical and theoretical research output that have a huge impact on management and related fields. CJM encourages innovative ideas and new perspectives on existing research.

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The aim of 'The Catalyst-Journal of Management' is to make sincere efforts to establish an effective communication channel between corporates, policy makers in business, and academic researchers to recognise and implement their ideas to create new trends in business. The scope of the journal includes the field of accounting economics, business accounting, business law, business model and strategy, business processes, customer relationship management, e-commerce, collaborative commerce, and net-enhancement. The Catalyst-Journal of Management is a refereed journal. All papers submitted to the journal go through a review process at the editorial desk.

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From the Desk of the Editor-in-chief

It gives me immense pleasure to bring out the volume 5 issue I of the journal The Catalyst -Journal of Management. Academic journal is a forum where academician from a specific discipline share research work and ideas by writing research articles and review the work done by others including published books.

We are glad to mention that there was a tremendous response to our call for papers from the academicians from the field of management. We would like to maintain the standard of the journal by referring the articles received from the authors to reviewers for judging the suitability of the articles for publication in the journal. We would therefore request the authors to judge their own articles in term of relevance to the the discipline of management, whether they add new knowledge to the discipline or not, who will benefit from the articles, if the information/data presented in the articles is from reliable sources, whether proper scientific methods have been used, if the language expression is correct and clear, and if the reference list is appropriate.

I congratulate the editorial team who has been the integral part of the success in publishing the journal. I would like to mention the support received from Dr. Poonam Bassi, Mr. Rajeev Kumar and Ms. Pooja Chahal. They meticulously worked towards bringing the journal to a standard shape. I wish to express my gratitude to the reviewer advisory editors for all their valuable inputs and suggestion for improving the quality of the journal.

I extended my deepest gratitude to our Hon'able Vice-Chancellor Prof. (Dr.) J.K. Sharma and Prof. (Dr) T.R. Bhardwaj without whose guidance and support this endeavour would not have been a success. My sincere thanks to our honourable Secretary sir Shri Gaurav Ram Jhunjhunwala ji who always encourage the Department to take such type of initiatives. My heartfelt gratitude goes to my colleagues for sending their valued academics/research contributions. Congratulation all the authors. I extended to u a hearty invitation to submit your manuscript for further issue of 'The Catalyst-journal of Management.

Arun Kant Painoli

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Appraisal system for academic institutions

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ABSTRACT
Although there is a large body of literature on the use of performance appraisals in income, there is l ess information on employee appraisals in higher education. This study details the appraisals of all u niversity teachers employed in the university. The research shows that employeecompetence and per formance can be equated with fair and reliable decision making as well as employee knowledge and skills. Dissatisfaction with the appraisal process due to the inability of the supervisor to complete the appraisal process on time and lack of training in appraisal of supervisors.

Keywords: Appraisal system, Performance, Feedback, Training, Rewards.

1. INTRODUCTION

The success of an organization depends on the quality of its employees. Employees play animportant role in any organization as they are the backbone of the organization. Without them,the organizatio cannot achieve its goals. However, in order for the organization to achieve itsgoals, employees need to be more motivated and reactivated. Therefore, human resourcemanagement (HRM) policies link t he organization's mission and vision to the performance of its people. Therefore the concept of perfo rmance evaluation comes into play.Performance measurement is a vital part of life and is widely use d in many organizations. Performance measurement is often used to measure, evaluate and assess the performance of individuals or organizations. The success of an organization depends on the perform ance of each employee and the effectiveness of their evaluation a management.Performance Apprais al is an important part of performance improvement where the performance of the employees of the organization is reviewed regularly and feedback is given to them.Therefore, performance appraisal is a continuous process that evaluates the input of eachemployee, understands their strengths and weak nesses and conveys the results of their effortsto the employees.This term is often confused with effor t, but performance is always measured by results rather than effort. For example, a student may put i n a lot of effort while preparing for an exam but get poor results. In this case, the effort is high but th e performance is low. In order to understand whether the employee is worth working for and whethe r they deserve a bonus, raise or promotion, their performance needs to be evaluated over time.

2. OBJECTIVES OF THE PERFORMANCE APPRAISAL

Primary Objective

- To Develop a performance evaluation system for teachers in schools

Secondary Objectives

- To Research and evaluate the effectiveness of current performance appraisal methods.
- To Gather feedback from raters and assessors on current performance metrics**.**
- ToGather information about deficiencies/inefficiencies of current performance measure
- To make recommendations to improve the assessment process based on feedback and other data collected

.

3. LITERATURE REVIEW

Performance evaluation methods are the processes through which assessments are conducted within an organization. These methods encompass the types of data collected and analyzed during the appraisal, the nature of communication between supervisors and their team members, and the various tools utilized for evaluating performance. The choice of evaluation methods can significantly impact the appraisal system implemented in the organization. As a result, multiple authors have described performance evaluation methods in various ways.

Landy and Farr (1983) categorize performance appraisal data into two types: judgmental (subjective) measures and non-judgmental (objective) measures. While judgmental measures are more commonly utilized, objective performance metrics have been useful for evaluating routine jobs since the 1940s (Rothe, 1946). Additionally, other non-judgmental indicators, such as absenteeism, research output, and course coverage, have been examined for their insights into the overall health of an organization (Campbell, Ford, Rumsey, Pulakos, Borman&Felker, 1990). Nonetheless, objective measures come with their own set of challenges.

Absenteeism metrics are often inapplicable to numerous positions, tend to be inaccurate, and arise from various factors depending on the interpretation of absence. They also vary in the observation period and lack correlation with one another (Murphy & Cleveland, 1995). Using research work and experience as benchmarks is challenging due to the difficulty in distinguishing between voluntary and mandatory tasks. Additionally, promotion rates and salary increases are unreliable standards, as these can be influenced by institutional quotas, and salary adjustments may be driven more by the financial health of the organization than by employee performance. Such issues undermine the validity of these measures (Murphy & Cleveland, 1995). Furthermore, Landy and Farr (1983) noted that objective measures often exhibit low reliability. For instance, gathering data on invigilators and the absences of visiting faculty members who likely do not have a consistent daily or weekly schedule is not logical. The evolving nature of work suggests that subjective assessments may remain more widespread and valuable. (Murphy & Cleveland, 1995).

The implementation of management by objectives (MBO) for defining and assessing job performance is commonly utilized due to the direct correlation between employee contributions and the organization's goals and outcomes (Drucker, 1954). Let’s explore some key elements of MBO programs.

MBO necessitates participation in the goal-setting process. Both the supervisor and subordinate collaboratively establish goals and performance metrics for the subordinate(s). They determine what objectives must be achieved and how those achievements will be evaluated. Additionally, MBO offers feedback on progress toward these goals. In an MBO framework, performance is primarily evaluated through measurable results, which the performer aims to attain. Setting goals is often a subjective process that involves negotiation between the administrator and staff (Murphy & Cleveland, 1995). When a high-performing staff member fails to meet their targets, the administrator frequently renegotiates the objectives to ensure that the capable individual can achieve those outcomes. Two disadvantages of a Management by Objectives (MBO) system are the significant amount of paperwork, especially in the initial stages, and the concern that MBO tends to create ambiguity in responsibilities, forcing staff to measure objectives that may not be quantifiable (Berman, 1980). In an alternative approach, Sims and Foxley (1980) identify four classifications used in higher education by college professionals: comparative methods, absolute standards, management by objectives, and direct indexes.

Comparative methods include:

(a) Ordering all staff members from least to most effective.

(b) Select the most effective and then the least effective staff member alternately, transferring their names to separate lists, and continue this process until all names have been removed from the initial list.

(c) Evaluating each staff member against all others and establishing a final ranking based on the number of times each staff was ranked higher than the others.

(d) A mandatory distribution system in which a designated percentage of employees are categorized as top performers, followed by a second group in the next tier, and another group placed in the lowest performance category.

Absolute standards methods encompass various approaches, including critical incidents, weighted checklists, forced choice, conventional ratings, and behaviorally anchored rating scales. Critical incidents focus on identifying the key requirements of a job, with supervisors tasked to rate each staff member across these categories. Weighted checklists involve creating a list of goals for each staff member, which the supervisor uses to evaluate goal completion. The forced choice method requires supervisors to select the most descriptive statements for each staff member from a list that distinguishes between successful and unsuccessful performance, as well as desirable and undesirable traits. Conventional ratings involve assessing staff attributes on a scale using categories such as excellent, average, and poor. Behaviorally anchored rating scales represent a quantitative adaptation of the critical incident method, employing scales that are based on specific behaviors and performance levels observed in the position. The evaluation methods discussed above offer a thorough examination of the strategies commonly utilized by different organizations. These methods exist on a spectrum that ranges from subjective to objective and from unstructured to structured approaches.

4. PERFORMANCE APPRAISAL AND RELATED VARIABLES

The performance appraisal process is quite intricate. Its primary emphasis lies in identifying the strengths and weaknesses of employees while also aiming to meet target goals. Consequently, this information is utilized to train staff and motivate them by equipping them with the necessary skills.

Rewards Rewards are important in any organization to motivate employees and achieve goals. In any organization, especially in education, goals and objectives must be clearly defined and leaders must define each person's responsibilities, communicate them, and value the energy they put into the job.

Training Evaluation is a complex and difficult process that must be done accurately and carefully. The use of comparative evaluations is unknown to members. They need to learn how to use them in the best way. This training will be a way for this employee to acquire and gain skills, abilities, knowledge, information and abilities that will be useful in their future work.

Promotion

In the education sector, there has been a prevailing culture, particularly in the appraisal process, where bonuses or promotions are often awarded. Are given. It was also noted that the previous appraisal system did not guarantee that high-performing faculty members were treated fairly. With regard to both the appraisal and promotions. In order to establish an appraisal system for institutes, the administration must understand the importance of evaluating the performance of the institutes.

Pay raises and promotions are awarded since research has demonstrated that when employees are motivated, their productivity improves workplace.

Feedback

The performance appraisal system serves as a tool for the administration to assess and offer feedback on faculty members' performance. Additionally, they identified areas where they could enhance their performance and made necessary adjustments. The feedback mechanism serves as a tool for recognizing the strengths and weaknesses of a particular system or process. Each faculty or department has its own strengths and weaknesses. It is suggested that in order to enhance the performance of a worker, it is crucial to. Identify his/her areas for growth and areas of weakness through constructive feedback and support, thereby encouraging faculty participation. In terms of improvement and dedication to their work, the employee consistently demonstrated a high level of commitment. Mostly, feedback for development and improvement may be given. Verbal feedback is important, but it is crucial to have a written record of the individual's work performance. A change in salary or job position (or a decrease in salary or demotion or termination) is implemented. For the proper functioning of an educational institute. To achieve its objectives, the administration must consistently communicate the value, strengths, and worth of its employees, while also acknowledging and appreciating their efforts. Completed and set a record of open and unbiased feedback. 360-degree feedback can be used to assess the performance of an individual of a person.

5. GUIDELINES FOR A SUCCESSFUL PERFORMANCE APPRAISAL SYSTEM

There are four key elements that contribute to the success of a performance appraisal system. They are:.

The primary factor to consider is that the appraisal system design necessitates a clear objective for conducting the performance appraisal. All members it is crucial to have a clear understanding of the objectives of performance appraisal and the reasons behind its implementation.

The Second factor is predetermined objectives will assist in achieving the desired outcomes the administrators will be responsible for choosing the performance criteria, which will enhance their motivation to conduct the appraisals correctly.

The third factor highlights the significance of appraisal procedures that are user-friendly and easily comprehensible. Various parameters such as to ensure clarity and understanding, performance criteria, rating procedures, and feedback should be unambiguous and easily comprehended by both supervisors and employees their followers.

The final factor for an effective system design key to a successful system design is ensuring that both supervisors have a clear understanding of their roles in the appraisal process. and their subordinates. This necessitates them to acquire the necessary training and education. The above four factors provide clear guidelines for establishing a successful appraisal system.

Managers and teachers often disagree on performance appraisals. While most people recognize the b enefits of recording, communicating, and setting goals in the workplace, many are disappointed with the actual results that come from performance measurement in their organizations.

The benefits and merits of performance appraisals are often exaggerated, with statements like, “Performance appraisals are timeconsuming and energyconsuming, they frustrate and disempower p eople. They also add insult to injury by undermining selfconfidence and performance.” They produce the best results, but they are very costly. We have covered several issues related to performance measurement:

(a) They demand too much from supervisors,
(b) Standards and ratings vary widely and sometimes unfairly,
(c) Personal values and bias can replace appraisal standards,
(d) Employees may not know how they are rated due to lack of communication,
(e) The validity of ratings is reduced by supervisory resistance to give the ratings - particularly negative ratings,
(f) Negative feedback can demotivate employees, and
(g) They interfere with the more constructive coaching relationship that should exist between superiors and their employees.
(h) They may be biased.

6. IMPACT OF THE PERFORMANCE APPRAISAL SYSTEM TO THE RESPONDENT'S PERFORMANCE

1) Employees Commitment

Committed employees have a bond with the organisation, which, is typically effective in form, and it makes them more willing to perform. there are various elements that tell how personnel are devoted to running for an organization. it's been determined that while a process has extra duty, it brings greater stress and burden for that reason worker tends to experience the paintings more as he reveals it hard/ The extra the employees are inspired and challenged of their jobs, the much more likely they may be to be dedicated to a given work

Consequences inform us that the performance appraisal machine of institutes strongly impacts the commitment of the team of workers. It additionally shows that the performance and effectiveness of the body of workers are strongly stricken by their motivation in doing their paintings is affected. for that reason, the main goal of performance appraisal machine become to improve the performance of an employee. The setting of targets and the assessment of outcomes towards goals turned into the aim of the vintage control machine. however the contemporary control aims at how matters are finished in addition to what is done. thus this modifications the concept of performance appraisal system absolutely.

2) Employee Skills

In every organization, new employees are hired for specific skills and qualities to be professional and productive workplace. Some of the most important employee skills in an office are how people communicate with each other and in what manner research/planning is done. The evaluation system strongly influences the technical and managerial skills of employees. On the other hand, the work skills of employees and area of expertise are moderately affected. Based on the result of the study, it can be concluded that the performance appraisal system is a way to reward good performances and also plays a vital role in the development of the employee's skills. Training, like development, plays a major role for both employees and employees managers mutually identify their development needs. In this way, the knowledge, skills and performance of employees can be improve

The necessity of API for academic professionals

Academic Performance Indicators (API) are a set of indicators/rules that establish rules and criteria for categorical assessments such as and the employee's overall performance. These indicators are the building blocks of our evaluation system. They are integral and play a vital role in the evaluation/classification of performance records. Indicators have different fields and forms that must be is filled in by the teacher in question during the performance of his/her function in years. Using the API allows convenient and comprehensible for the faculty and its administrators to understand the evaluation criteria and thus support the positives outlook on the entire evaluation process.

Implementation of API

Having discussed the need to use APIs versus other rating methods for performance-based ratings, we'll now look at how The API has been incorporated into our rating system. There are four login levels in the system, i.e. four potential users, i.e. Professor, Head of Department (Hod), Director and Administrator. With the rise of the designation, the viewer will see not only his colleagues, but also his subordinates. It is every employee is expected to regularly and accurately fill in their details so that they can check i their superiors. The system consists of various forms that the user (faculty) must fill in correctly at the end of the relevant academic year.

Forms:

Part A: General Information

This part collects the basic information of the user such as their personal information, academic qualifications, work details, etc.

Part B: Academic Performance Indicators

This is divided into three categories - category 1, category 2 and category 3.

Category I - includes entries related to teaching duties, outside classroom interaction, innovation teaching, examination duties,

updating of subject content, examination duties, etc.

Category II - includes co-curricular, extension and professional development activities, such as contribution to corporate life,

institutional governance, administrative responsibilities, sports / cultural and/or NSS activities, etc.

Category III - includes research, publications and academic contributions such as research papers published, research publications,

research project(s) work, research guidance, invited lectures, etc.

Part C: Other relevant information

Details regarding any significant credentials, contributions, awards received, etc.

These data are required to be entered by the employees concerned at the end of each academic year. API score based on UGC guidelines for all categories will be calculated. The final API score will then be communicated to the user via their certificate. Supervisory he can check the performance of his subordinates and evaluate them accordingly. Subordinates can raise a problem if they find one discrepancies or are satisfied with the assessment.

What new things can be gained from this API implementation?

The main disadvantage of the currently used appraisal system/process is that it is very tedious to go through all the employee data. for all years in one place, because currently all data is collected in an excel sheet. The proposed system does much of this work simpler by allowing all data to be consolidated in one place using a searchable and retrievable database system data much more convenient and easier. This in turn makes it easier for the administrator to screen his subordinates according to various parameters with all your data at your fingertips and come to sound conclusions. Also, by providing an attractive GUI, there are more candidates comfortable and better understand the evaluation process, its limitations. In addition, it offers other functions that the user can Also check out the performances of his colleagues.

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Employee Turnover: Causes, Importance and Retention Strategies

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ABSTRACT

The objective of this research is to understand the causes of employee turnover and retention strategies in an organization. The main key research findings of this research is to indicate that employees have several reasons to leave their workplaces, such as job stress, job dissatisfaction, lack of growth, better opportunities, job security,poor work environment, motivation, wages, and rewards. Furthermore, employee turnover has a huge impact on an organization due to the costs associated with employee turnover and can negatively impact the productivity, sustainability, competitiveness, and profitability of an organization. However, the organization must understand the needs of its employees, which will help organizations, adopt certain strategies to improve employee performance and reduce turnover. Thus, implementing strategies will increase job satisfaction, motivation and the productivity of individuals and organizations, which can reduce employment problems, absenteeism, and employee turnover.

Keywords: Turnover Intention, Job Stress, Job Satisfaction, Work Environment, Retention Strategies.

Introduction

The majority of commercial organizations today are dealing with a very odd issue pertaining to the use of their human resources. On the one hand, they are dealing with the issue of overstaffing and are searching for strategies to reduce the excess workforce through employee termination, voluntary retirement, and other measures. Conversely, companies are dealing with the issue of a rising staff attrition rate and are working hard to create retention methods. Employee turnover, sometimes referred to as employee attrition, is the rate at which an organization's working staff changes over a given time period.When an employee departs the company, whether voluntarily or involuntarily, turnover takes place. Resignation for relocations, work abroad, and other personal and professional reasons lead to voluntary termination.An involuntary termination happens when an employee is let go for reasons relating to the suitability of their abilities, qualifications, and work habits, whether it be due to misconduct, subpar performance, or the employer's own will. The degree to which current employees depart from the company and new hires join within a specific time frame is known as staff turnover.

Types of turnover

1.Voluntary Turnover

This happens when workers decide to quit the organization. Opportunities for professional growth, increased pay, private factors, or discontent with the workplace could be among the causes.

2. Involuntary Turnover

When a company fires employees, typically for misconduct, poor performance, or downsizing, this kind of turnover occurs.

3.Functional Turnover:

It refers to the termination of workers who are not making a significant contribution to the company.

Because it enables the business to replace ineffective employees with more qualified ones, this type of turnover can be advantageous.

4. AvoidableTurnover:

It occurs when a person quits the organization for avoidable reasons, like inadequate pay, poor management, or a lack of possibilities for professional growth. Businesses can take action to stop this kind of turnover.

5. Unavoidable Turnover:

It refers to employee departures due to circumstances like retirements, family moves, or health concerns that are out of the company's control. Usually, this kind of turnover is unavoidable.

Turnover Calculation

By dividing the number of employees that left or are dismissed by the total number of employees, employers can determine turnover. For instance, if a company employs 150 people and 11 of them leave within a year, and another 14 are fired, the annual turnover percentage can be calculated by dividing the total number of departing employees by the total number of employees that comprise the company's workforce. In this case, the turnover rate is 16 percent, or 25 divided by 150

Objectives:

1) To study the concept of Employee Turnover.
2) To find out the factors responsible for potential turnover.
3) To focus on various retention strategies management can adopt to preserve valuable employees.

Methodology

The current study mostly uses secondary data and is descriptive in nature. Books, papers, news pieces, and research journals are examples of secondary data. In order to examine the elements that contribute to possible employee turnover and the management's collective action initiatives to keep valuable staff members in the company, the author has conducted a thorough literature review of published research studies, case studies, workshop and seminar proceedings, etc.

Review of Literature

1. Zineldin, (2000) has viewed retention as “an obligation to continue to do business or exchange with a particular company on an ongoing basis”.
2. Dr. K. Balaji Mathimaran & Prof. Dr. A. Ananda Kumar, (2017) the study tries to review the various available literature and research work on employee retention and the factors affecting employee retention and job satisfaction among the employees. The findings of the study suggested that certain variables are crucial in influencing the employees decision to either leave or remain in an organization. Such variables include training and Development, recognition/reward for good performance, a competitive salary package and job security.
3. Dr G. BALAMURUGAN, (2016) Thestudy suggested that the employee retention has been quite challenge for IT-units and HRD should focuson Workpressure, Rewards and recognition retention strategies. Organizations have to providetheir employees with the best career advancement and opportunities, supervisor support, working environment, workpressure, rewards, and recognitionand should work on them.
4. Zhang Yanjuan, (2016) Thearticle attempted to make a summary on the employee turnover influence Factors and puts forward counter measures from personal factor, organization and work factor, social and economic factor,

5. Maqsood Haider.etal,(2015) This study examined the human resource (HR) practices that promote employee retention. Effective HR practices can reduce employee turnover and increase retention within an organization. It was observed that Compensation and culture has a positive relationship with employee retention where as training and development has a negative one. This suggested the management to devise the effective strategies to improve the employee retention.

Factors responsible for employee turnover

Employee turnover can be caused by a wide range of factors, and understanding these causes is essential for organizations to reduce unwanted departures. Below are some of the most common causes of employee turnover:

1. Poor Job Fit:

If job duties or the workplace culture don't suit an employee's abilities, interests, or career objectives, they may quit. Dissatisfaction and finally attrition may result from a mismatch between the job and the individual.

2. Lack of Career Advancement Opportunities:

If employees perceive chances for professional development, they are more inclined to remain with the organization. Employees may look for chances elsewhere if there is no clear path for skill development or promotion.

3. Poor Pay and Benefits:

Lack of rewards or recognition, low pay, and poor benefits can make workers feel underappreciated. Better compensation and benefits may attract employees to other companies.

4. Poor Work-Life Balance:

Long hours, demanding work, or a lack of flexibility can cause employees to feel overburdened and burned out, which may cause them to leave for positions that offer a better work-life balance.

5. Unhealthy Work Environment or Toxic Culture:

Poor communication, a lack of support, office politics, or even harassment are all signs of a bad work environment that might drive individuals to quit. A hostile work environment frequently results in excessive employee turnover.

6. Lack of Recognition or Appreciation:

Workers may lose interest in their jobs and eventually quit if they believe that their colleagues or managers do not value or recognize their accomplishments.

7. Poor Management:

Managers that are unsupportive or inefficient frequently cause employees to quit. Employees may seek for superior leadership elsewhere if they experience micromanagement, poor communication, a lack of leadership, or insufficient feedback.

8. Better Job Opportunities Elsewhere:

Employees may leave simply because they receive a more attractive offer from another company. This could be due to better compensation, career growth prospects, or alignment with personal values.

9. Health or Personal Issues

For personal reasons, such as family responsibilities, health issues, or the desire for a change of pace in their own lives, employees may go. Frequently, the employer has no influence over these factors.

10. Lack of Training or Development:

Workers who believe they are not getting enough professional development or training may quit to look for other possibilities to advance their knowledge and abilities.

Effects of employee turnover

Employee turnover can have significant effects on both the organization and its employees. These effects can be positive or negative depending on the circumstances, such as the reason for turnover and how well the company manages it. Here are the common effects of employee turnover:

Negative Effects of Employee Turnover:

1. **Increased Recruitment and Training Costs**:

When workers depart, businesses have to invest in finding, employing, and educating new hires. These expenses may be high, particularly for positions requiring a protracted onboarding procedure or specific skills.

2. **Decreased Morale and Employee Engagement**:

The morale of the surviving staff may suffer from frequent turnover since it might result in more work, stress, and uncertainty. Workers who observe a high turnover rate may also get demotivated and begin to doubt the company's management style or culture.

Positive Effects of Employee Turnover:

1. **Opportunity for Fresh Ideas and Perspectives**:

New hires can contribute new viewpoints, ideas, and methods for solving issues. Innovation and process improvements may result from this, particularly if the organization encourages new workers to question the status quo.

2. **Cost Savings from Underperforming Employees**:

By eliminating inefficiencies, turnover may eventually help the company if it leads to the exit of underperforming workers. Changing them out with more productive people can boost output as a whole.

3. **Improved Employee Satisfaction**:

Sometimes turnover can lead to a healthier work environment if it results in the departure of toxic employees. Replacing these individuals with people who fit better with the company culture can enhance employee satisfaction.

Trend in Employee Turnover

Employee turnover has been studied through various published sources, which shows the increasing trend of turnover in various industries.

Figure-1 shows a bar titled “Employee Turnover by Industry 2019-2020.” It compares the annual total separation rates (% of employees leaving their jobs) across various industries for the years 2019 and 2020. X-axis shows the various industries such as manufacturing , retail trade, healthcare , education ,accommodation /food services etc and the Y-axis represent the turnover rate in percentages. There are two bars dark blue(2019) and light blue(2020) . This images show that industries like accommodation /food service and arts /entertainment shows significantly higher turnover rates as compared to others. Industries like finance and insurances show low turnover rates as compared to others.

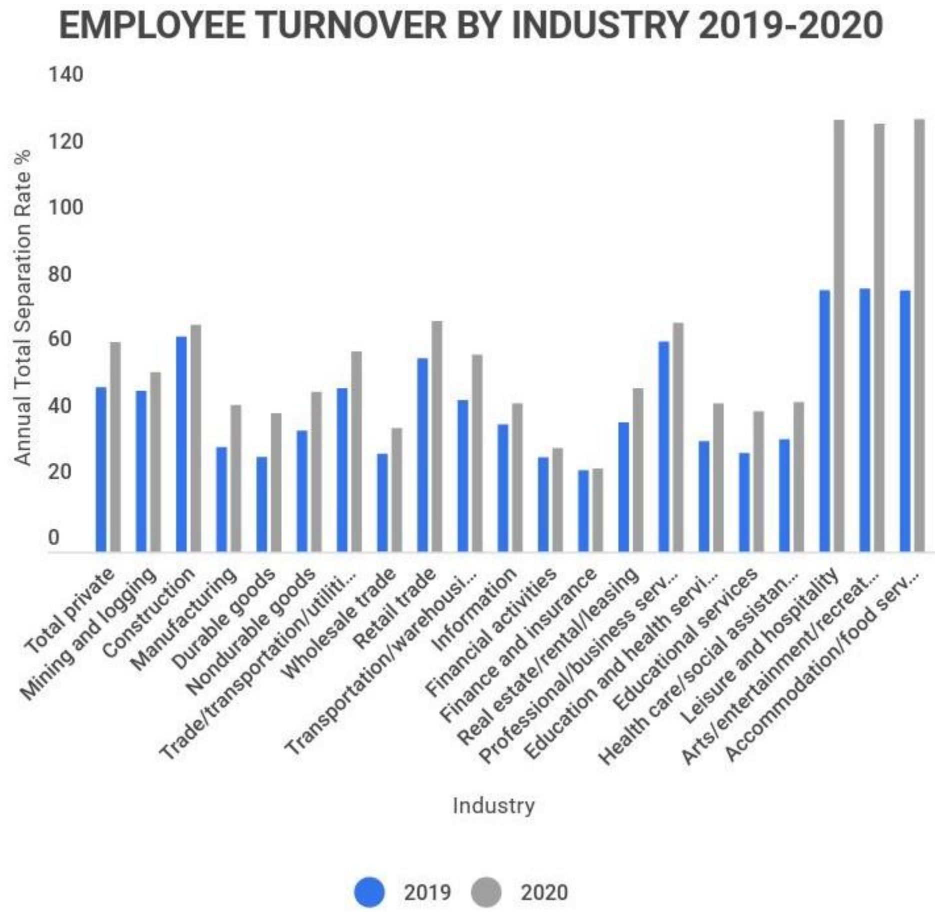

Figure-1

Retention Strategies to preserve valuable Human Resources

The company must implement a retention strategy in order to keep top performers and reduce excessive personnel turnover. An effective retention strategy should include both short-term and long-term measures to keep desired employees.

1. Package for Long-term Stay (Financial Incentives)

Employers may provide unique perks to staff members who remain with the company for a longer period of time. Stock option plans, gradually growing financial incentives, and delayed payments of long-term financial incentives like superannuation allowance or long-term stay bonuses are a few examples of how to extend employee tenure in the company.

2. Retention Bonus

When an organization is going through a transition, like a merger, acquisition, or organizational reorganization, and employees are looking for a new position because they are unsure of their future prospects, retention bonuses are typically given. It mostly serves middle-level and rank-and-file workers as well as senior executives. Payment of the retention incentive might be made in installments over time or as a single lump sum. It can also be paid based on other metrics, such as length of service; depending on certain conditions, it can be paid uniformly to all employees or discriminatorily.

3. Intangible Benefits

Many companies provide a range of intangible advantages to their staff in an effort to keep them on board and foster a sense of belonging. Many companies, especially multinational corporations

(MNCs) that operate in India, use abroad training and employment, health care, and other services while their personnel are sent to other locations.

4. Matching Jobs and Individuals

A mismatch between their employment and their organizations causes many employees to switch. Many businesses provide their workers the option to move from a line function to a staff function and vice versa; they can also choose between a fast-track project and a slow-track project, among other options. This flexibility contributes to a high level of job satisfaction by lowering stress and boredom.

5. Fancy Designations

Offering staff prestigious and important-sounding titles in an effort to keep them with the company is a recent development in the Indian corporate sector. These designations frequently differ greatly from the nature of their work. Employees are members of society, hence the basic reasoning behind giving them such ostentatious titles may be that they can improve perceptions in the community.

6. Employee Relationship Management

Employee relationship management is a broader collection of functionalities that includes workforce analysis, learning performance and reward advice, and a variety of other operational concerns pertaining to human resource management. Employing companies should be careful to cultivate a positive working relationship.

7. Career Development Program

Every person worries about their career. They can receive conditional support from organizations for certain courses that will benefit their business. Conditional aid indicates that the business will only pay for the costs if it receives a specific percentage of the total marks. Additionally, there should be a cap on the number of seats available for that course, and admission should be determined by a test. Companies may require individuals to sign a bond with them in order to be allowed to such a program, such as a two-year stay or something similar, upon successful completion of the course.

8. Performance based Bonus

The company's profit, which is obviously determined by the top management's strategic planning and employee productivity, is always disclosed to the staff. Companies can offer bonuses to employees in order to motivate them to put in greater effort. Employees will be motivated to work hard because they can relate to the company's success. Productivity should be the basis for this bonus. Businesses can make sure that this bonus isn't placing undue strain on the company's budget by reducing a portion of pay increases and giving them to staff members as bonuses.

9. Loyalty Bonus/ Retention Bonus

Organizations can introduce a Loyalty Bonus Program in which they can reward their employee after a successful completion of a specified period of time. This can be in the form of Money or Position, this will encourage the fellow employees as well and they will feel fascinated.

10. Gifts at some Occasion

In order to make employees feel good and show them that management cares about them, organizations can give them gifts for one or two holidays. Greeting staff members and giving them a small gift on their birthday or wedding anniversary fosters a sense of community and boosts their morale.

Current Scenario Employee Turnover-

Figure-2 comparing turnover rates (%) across various industries for the three consecutive year : 2021, 2022, 2023. Each year is represented by a different color: red (2021), orange (2022), and blue(2023). The “Leisure & Hospitality” sector shows the highest turnover rate across all three years, with a peak in 2022, slightly decreasing in 2023. Industries like “Government” and Education & Health” shows the lowest turnover rates, remaining relatively stable across the three years.

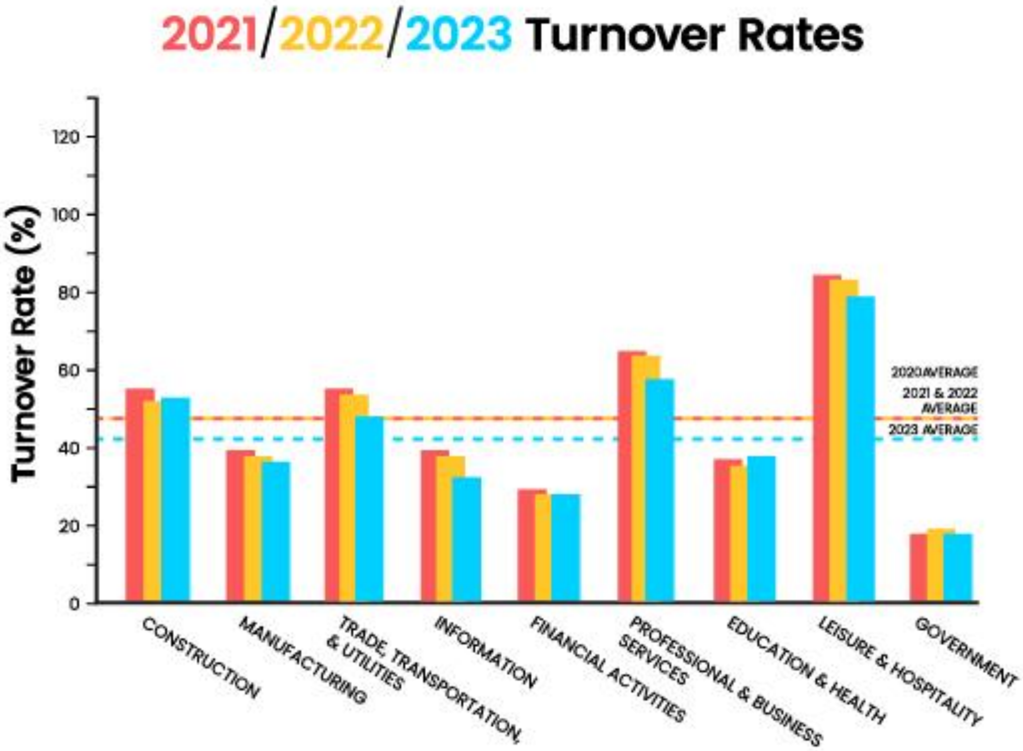

Figure-2

Conclusion

Organizations should pay careful attention to the reasons of attrition in the preset when making future plans. The organization's greatest asset its people would be ignored if it ignored the reasons why individuals were departing.The “Leisure & Hospitality” sector shows the highest turnover rate across all three years, with a peak in 2022. Industries like “Government” shows the lowest turnover rates, remaining relatively stable across the three years. Industries like “Manufacturing” “Information” and “Education and Health” is show average turnover .The task need people to complete, yet people are more than the duties they carry out. They are aspirations, hopes, dreams, and innovative and creative ideas. Workers are an organization's most valuable resource. They have a huge impact on the organization's growth and profitability. They infuse the organization with creativity and clear the path for long-term growth. As a result, companies should establish a culture that encourages a lot of room for advancement, gratitude for the work done, and a welcoming, cooperative environment that helps employees feel like they are part of the company in every way.

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Inflation Forecasting in Emerging Markets: A Machine Learning Approach

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Abstract

In developing and emerging economies, the accuracy of macroeconomic forecasts is often constrained by the limited availability of data both in time series and in cross-section. Given this constraint, this paper uses a suite of machine learning methods to explore if they can offer any improvements in forecast accuracy for headline CPI inflation (y-o-y) in 3 emerging market economies: India, China and South Africa. For each forecast horizon for each country, we use a host of machine learning models and compare the accuracy of each method to 2 benchmark models (namely, a moving average forecast and SARIMA). For India, we find that the deep neural networks out-perform the benchmark forecast for all horizons except the 1 month ahead forecast. The reduction in forecasting error ranges from 44% to 63%. For South Africa, the neural network model provides a reduction in forecasting error between 42% and 57% for the 1 year forecast. For China, the reduction in forecasting error is much more modest ranging from 5% to 33%. An average forecast using different neural net methods performs much better than any individual forecast.

1. Introduction One of the most important goals of central banking is to maintain a stable inflation rate. In an analysis of central bank objectives for 47 developed and developing economies, BIS finds that price stability is the most important objective for every single one of these economies1 . This suggests that developing a better inflation forecast is probably the most central issue in central banking research. Over the last few decades, most traditional inflation forecasting methods assume that there exists an underlying stochastic data generating process which can be determined by a prespecified model. However, such pre-specified models suffer from two key short comings. Firstly, a pre-specified model "can only be as good as its specification, regardless of what the data might suggest" (Jung, Patnam and Ter-Martirosyan, 2018). Secondly, if the underlying data generating process changes, the prevailing pre-specified model is invalidated. For instance, Stock and Watson (2007) estimate an integrated moving average (time varying trend cycle) model for inflation in the

USA and find that the coefficients for this model changed in the beginning of the 1970s and then again in the mid-1980s, leading them to conclude that "…if the inflation process has changed in the past, it could change again". Additionally, the extant forecasting approaches "bring a variety of undesirable properties, ranging from high sensitivity to model specification to high data requirements" (Smalter Hall and Cook, 2017). This is particularly relevant for forecasting inflation (and other macroeconomic variables) because it is not a high frequency variable, being available only at the monthly, quarterly or annual level. This problem is compounded for emerging and developing economies where "data availability is even poorer and sometimes close to not existent" (Jung, Patnam and Ter-Martirosyan, 2018). An alternative approach (Breiman, 2001) advocates for models which do not make any assumptions regarding a) the underlying data generating process and thus are invariant to changes in the same and b) do not make any assumptions regarding the underlying relationship between the independent variables and thus are not sensitive to model mis-specifications. Models belonging to the second school of thought focus on finding a function that best represents the relationship between the dependent and independent variables. Machine learning methods fall in this category of statistical modeling. Most machine learning models estimate non-linear relationships, which helps overcome a key disadvantage of linear models, primarily that linear models "fail to identify many macroeconomic phenomenon namely asymmetric business cycles, volatility of stock exchange, inherent regime switching and many others" (Tong, 1990). Thus, machine learning models provide an opportunity to improve accuracy in a limited data environment and as such are extremely relevant for developing and emerging markets. As a first step towards evaluating the usefulness of machine learning methods for developing markets, this paper forecasts the headline CPI inflation (y-o-y) for 3 emerging market economies: India, China and South Africa. For India, we forecast the 1 month ahead to 12 month while for China and South Africa we forecast the 12 month ahead forecast. We use three different classes of supervised machine learning methods, namely: penalized linear regression methods (Elastic Net regression), tree based methods (random forests and XG-Boost) and neural networks (CNN, CNN-LSTM and Encoder Decoder). For each forecast horizon for each country, we use a host of machine learning models and compare the accuracy of each method to 2 benchmark models (namely, a moving average forecast and SARIMA). We find that the machine learning models – in particular the deep neural networks – out-perform the best benchmark forecast for all horizons except the 1 month ahead forecast. For the 3-month forecast of India's inflation, neural network methods provide between 39% to 55% reduction in forecasting error when compared to the benchmark model, where forecast error is measured as the mean absolute deviation of the forecast from the realized inflation. For a 1 year forecast if Indian inflation, neural network models provide a 27% to 44% reduction in forecast error. The superior performance of the most non-linear methods suggests that there exists a non-linear relationship between CPI (y-o-y) and its determinants in the three emerging market economies (baring the 1 month ahead forecast). Notably, deep neural networks are able to forecast both the peaks and troughs in CPI inflation despite having been trained on small samples. Thus, there are gains to be made from adopting machine learning methods to inform policy decisions in India specifically and all emerging market economies generally. We find that a combination of the three neural net methods provide an improvement of each method individually for all 3 countries. At the one year horizon, the average neural net forecast results in a reduction in forecasting error (measured by the Mean Absolute Deviation) of 51% for India, 30% for China and 67% for South Africa.

While neural network methods provide limited scope for determining causal relationships, they do provide some avenues for determining which independent variables contribute most significantly to the forecast accuracy for each model. For each machine learning model, we determine which independent variables contribute most significantly to the accuracy of the forecast (variable importance). For CPI inflation in India, we find CPI and its sub-components, food, oil and bank related variables improve the forecast accuracy most significantly, which reinforces the findings of the literature examining the determinants of CPI inflation in India. The rest of the paper is organized as follows: Section 2 presents the literature review. Section 3 describes the benchmark models and the machine learning methods. Section 4 explains the methods used for interpreting each machine learning method. Section 6 describes the sample and variable construction. Section 7 presents the results of the forecasting exercise while Section 8 presents the interpretation of the forecasts. Section 9 concludes.

2. Literature Review

The literature on the use of machine learning methods for the forecasting of macroeconomic variables is limited but is expanding rapidly. Jung, Patnam and TerMartirosyan (2018) use elastic net, SuperLearner and Recurrent Neural Networks to forecastthe macroeconomic data of 7 advanced and emerging economies and find that the machine learning methods outperform the benchmark WEO forecasts. Smalter Hall and Cook (2017) forecast civilian unemployment in the US using 4 different deep neural networks, each of which outperforms the benchmark directed autoregressive model over short horizons. Biau and D'Elia (2010) find that Random Forests combined with a linear model out-performs an AR model for forecasting the GDP growth in the euro area. Tkacz and Hu (1999) forecast GDP growth using artificial Neural Networks (ANN) which are 15% to 19% accurate than the linear benchmark models considered. In contrast, Chuku, Oduor, and Simpasa (2017) use artificial neural networks to forecast macroeconomic variables in African countries and find that they only marginally outperform ARIMA and traditional structural econometric models. The literature on the use of machine learning methods for forecasting inflation is even sparser. Medeiros, Vasconcelos, Veiga, and Zilberman (2018) forecast in inflation over multiple horizons in the 1990s and 2000s for the US and find that machine learning models (random forests in particular) dominate the benchmark models. Chakraborty and Joseph (2017) present three case studies illustrating the potential utility of machine learning at central banks, of which one is forecasting CPI inflation (UK) on a medium term horizon (two years). They find that the machine learning model beat the benchmark AR and VAR models by at least 29%. McNelis and McAdam (2005) estimate linear and neural network-based models "for forecasting inflation based on Phillips–curve formulations in the USA, Japan and the euro area". They find that the neural network based models outperform the linear models for forecasting the euro area service price indices but have variable performance across consumer and producer indices. Nakarumra (2005) finds that on average neural networks dominate univariate AR models on for one and two quarter ahead inflation forecasts for the US. In India, the literature on the use of machine learning methods - in particular, for inflation forecasting using multivariate data - does not exist. A recent paper by Pratap and Sengupta (2019) estimate CPI inflation using a suit of machine learning models using univariate data but find that none of the models can out-perform an SARIMA model. A paper by Sanyal and Roy (2014) compares linear, non-linear and consensus forecasting for IIP and GDP in India. Sanyal and Roy (2014) find that combination forecasts dominate linear and nonlinear methods for forecasting both IIP and GDP in the short horizon (1-6months). For long term forecasts (7-12months), non-linear methods are best for IIP while consensus forecasts are best for GDP. However, the paper observed improvement in forecast accuracy by using "combination forecast for series with long memory property less volatile series." Our paper is the very first to examine neural network prediction to examine inflation prediction in three of the BRICS countries – India, China and South Africa. Our use of multiple countries mitigates concerns that this method is not generalizable across several countries.

3. Model Description

This section describes each machine learning method used CPI headline inflation for three emerging market economies: India, South Africa and China along with the benchmarkmodels (those that we compare the given machine learning method with in terms of prediction error). We choose a multivariate approach for forecasting because we assume that "the inclusion of additional information as model inputs will improve model considerably" (Cook and Hall, 2017). In the remainder of the paper the notation we is throughout the paper is as follows: yi is i th observation of the dependent variable y (for i = 1 ,2, . . , N), ŷi,a is the predicted value of yi, Xi,p is the ith observation of independent variable.

3.1 Benchmark Models

We consider two benchmark models: moving average and seasonal ARIMA. For each forecast horizon h, the moving average forecast (given my MA(h)) is computed as follows $\hat{y}t+h$ = 1 $H \sum \hat{y}t-hHh$=1 (1) i.e. the predicted value of yi at time t+h is the average value yi over the preceding relevant forecast horizon. The seasonal ARIMA (SARIMA) is an extension of ARIMA that is capable of modelling the seasonal components in a univariate time series in addition to the autoregressive, moving average and trend components typically modelled by ARIMA. SARIMA is given by the following notation $ARI(p, d, q)(P,D,Q)m$ (2) where (p, d, q) are the traditional ARIMA parameters namely, p is the trend autoregressive order, d is the trend difference order and q is the trend moving average order. (P,D,Q) m are the additional seasonal parameters : P is the number of seasonal autoregressive terms, D is the number of set allows the evaluation of the model on unseen data to select the best model architecture, while still holding out a subset of data for final evaluation after finding the best model. The training, validation and testing data can be organized in many ways, namely, a) cross validation (bootstrap sampling for cross sectional methods), b) fixed window (training, validation and testing periods demarcated by dates), c) rolling window (shifting a window of fixed size ahead by one observation successively) and expanding window2 (increasing the window size by 1 successively). Each machine learning model needs a stopping/penalization/regularization criterion to reduce complexity and over fitting and they differ across machine learning classes. In the following sections, we move from simple linear models to increasingly complex models. We start with penalized linear regression methods (Elastic Net regression), tree based methods (random forests and XG-Boost) and deep neural networks (CNN, CNN-LSTM and Encoder Decoder). seasonal difference terms, Q is the number of seasonal moving average terms and m is the number of time steps for a seasonal period. (p,d,q) are determined using Autocorrelation Function (ACF) , Partial Autocorrelation Functions (PACF) and tests for stationary. m is traditionally set to 12 for monthly data and suggests a yearly seasonal cycle. The accuracy of each model is gauged using the Mean Squared Error (MSE). We choose the MSE as the metric to be minimized by each model because as compared to the mean absolute error (MAE), the MSE penalizes large deviations more. However, after having fit each model to achieve the lowest MSE possible using grid search to find the best hyper parameters, for ease in interpretation, to compare the forecasting accuracy across models in the testing sample, we report the Root Mean Squared Error (RMSE). We also report the mean absolute error (MAE) for each model. We report two accuracy improvement metrics – one for RMSE and one for MAE. The percentage accuracy increase is as compared to the best performing benchmark model i.e. for performance metric i ,$AccuracyImprovementi$ = ($bestbenchmarkbymetrici-machinelearningmodelmetricibestbenchmarkbymetrici$) . 100 We also report the over-estimate percentage which is the number of times the forecast exceeds the actual as a proportion of the total testing observations.

3.4 Tree based Models

Penalized Regression/ Shrinkage Methods Theβols estimates are BLUE (i.e. Best Linear Unbiased Estimates) i.e. they have zero bias but may have high variance. The variance of βols increases when a) P is almost as large as, equal to or greater than N and b) there is multi Collin earity.

The building block of all tree based machine learning methods is a decision tree. Decision trees can be of two types: classification trees and regression trees. Given that we want to forecast a continuous variable, we focus on regression decision trees. A regression tree is a non-parametric method which splits the entire Xp,i space into R rectangular and nonoverlapping sub-samples called leafs (given by $L1$, $L2$, …, LR) such the RSS is minimized across all R leaves as follows.

4. Results for India

We start with a comparison of the RMSE and the MAE for all the ML models at various horizons (1 month to 12 months) in Table 4. At the one month horizon, we find that the naïve/MA model performs the best when either RMSE or MAE are considered. In particular, the MAE for the naïve forecast is 0.46% whereas the best neural network method has a forecasting error of 0.57%. Thus, given that our average inflation rate in the testing period is 3.58%, this corresponds to an error of 12.85% (15.92% relative to this average value). However, the key power of the neural network approach comes about for longer forecasting horizons. In particular, for the 3 month ahead forecast, the naïve forecast error increases to 1.13%, which is a large error of almost 31.56%.

(shrinkage and tree bases models) have similar or worse performance relative to the naïve forecast. In contrast, the neural net models have a forecast error between 0.5% to 0.68% which is a huge increase in forecasting ability relative to the benchmark model as well as all other methods. In terms of forecasting error, the reduction in forecasting error of the best neural net model (CNN+LSTM) relative to the benchmark model is 48.15% if one considered the RMSE, and 55.54% if one considered the MAE. Another interesting feature that comes out here is that all the other non-neural network methods used (shrinkage and tree based models) have worse performance relative to the naïve model for this horizon of forecast. Next, we examine the 6 month forecast performance. Here again, the best neural network model (CNN) has a lower forecast error using the MAE relative to the naïve forecast by 56.3%. It is also important to note that other neural net methods – encoder decoder and CNN+LSTM also perform much better, reducing the forecast error by 47%-48%. In contrast, the best possible non-neural net method – the elastic net – has a forecast error improvement of 27.27% relative to the benchmark model.

It is clear from the above table that shrinkage or tree based models are not particularly useful for inflation prediction in India. This is not surprising in the light of the earlier discussion that these methods are not well suited to the time series setting, especially in the presence of structural change and non-stationarity. India has undergone a lot of structural changes in the last two decades, and in particular, has moved to an explicit inflation target in the last 5 years. One counter argument to the above is to use parameters estimated with a limited time series focusing on the recent past. However, we already incorporate this approach using the rolling window estimation for all the methods. Thus, any structural change that can be captured is already done so at least in the sense of ignoring all observations prior to the rolling window period. Thus, this result suggests that shrinkage and tree based models are fundamentally unsuited to inflation forecasting in the Indian context. The above analysis implies that neural network methods dominate other method learning methods, linear methods and naïve forecasts. However, an alternate 'popular' metric used, as evidenced from the above press articles, for evaluating accuracy of a given method is the number of times it provides an overestimate relative to an underestimate. It is feasible that non-linear methods may have lower absolute and square error, but may still be subject to average bias. To evaluate this, we tabulate the number of times each method provides an overestimate relative to the actual inflation. Recall that the training period was in the predemonetization period, prior to the large crash in food and vegetable prices postdemonetization, while the testing period does include the large crash in food prices.

Time Series Examination

The previous sub-section examined the average performance of various methods in forecasting inflation. To enhance ease of interpretation, we focus only three variables for the time series analysis – the actual inflation, the best benchmark method (the naïve forecast in allcases) and the best machine learning (always one of the three methods of estimation for neural network for all forecast horizons above 1 month). In each case, the best method is defined by the one with the lowest RMSE. Figure 5A shows the time series performance of 1 month forecasts for naïve and best machine learning forecast relative to actual. It is clear that both the naïve and the best machine learning overestimate inflation in the period when inflation was reducing – from Oct 2016 to June 2017. In the period from July 2017 to April 2018, both methods underestimate the actual inflation. Similarly, from June 2018 to the end our sample period, both methods overestimate the true inflation. One pattern that emerges for the 1 month horizon is that both methods lag the true inflation and underestimate inflation in periods of increasing inflation and overestimate inflation in periods of reducing inflation. Next, in figure 5B, we present a similar analysis for the 3 month forecast. One important fact that emerges is that the tracking error for both methods is much larger than that in the 1 month forecast. At the same time, it is clear that the naïve forecast is much worse relative to the actual inflation. Interesting, the machine learning model over predicts the dip in inflation during the demonetization and overpredicts the bounce-back as well. However, from May 2018, the model tracks actual inflation quite well and in fact, predicts the turning points quite well. Figures 5C, 5D & 5E provide these comparison for the 6 month, 9 month and 12 month horizons. At the 6 month horizon (Figure 5C), both methods have a significant deterioration in performance. The demonetization episode registers for the machine learning methods while the naïve forecast completely misses it. From June 2017 to July 2018, the best ML method shows a marginal increase, while the naïve forecast has the wrong direction of the trend as well as a very large forecasting error. In the post June 2018 period, the best ML method tracks the direction as well as the magnitude of the actual inflation very well. In contrast, at the 9 month and 12 month horizon, the performance of the best ML methods improves substantially. With the exception of the large inflation dip in June 2017, ML captures both the direction as well as magnitude of the actual inflation very well. It also performs well in the pre-demonetization period. In both cases, the naïve forecast varies little as anticipated.

Results for other emerging markets

Next, we examine the extent to which our results are generalizable using two other emerging markets – China and South Africa. We only estimate the neural network models as the results for the other methods were significantly poorer for all the other methods. Also, we focus only on the 12 month forecast, as this had the largest prediction error. A first difference of the results relative to India is that SARIMA performs much somewhat better for South Africa relative to the MA or naïve forecast. Hence, the benchmark model for South Africa we uses is the SARIMA model, while for China, the naïve or MA forecast performs much better

relative to SARIMA, as was the case with India. Table 6 presents the results of this estimation. For China, the improvement in performance using neural networks is much more modest, ranging from 5.8% for the encoder
decoder technique and 33.42% for the CNN-LSTM model for the MAE measure. The increase in accuracy using RMSE are even smaller. On the other hand, for South Africa, using neural networks enhances the forecasting ability significantly, with decreases in MAE ranging from 42% to 57%. In Table 7, we present the results of the fraction of forecasts that were overestimates. For China, the naïve forecast does very well, overestimating the realized inflation around 46% of the time. In contrast, South Africa appears to be much more similar to India in that both the naïve forecasts are overestimated for a large fraction of the testing sample (between 86% and 90%). For South Africa, using neural network methods improves the fraction of times that overestimation happens. Figure 6 presents the time series of 12 month forecasts using the best machine learning method and the actual inflation rates along with the benchmark model for China. This figure suggests quite a different picture relative to the comparisons in Table 6. In particular, the benchmark model is quite smooth and does not reflect a lot of the dynamics of the inflation rate. In contrast, the machine learning model has much more variable predictions, which, at least in a visual sense, vary more with the data. There are notable exceptions – the peak in July 2018 and the trough in Feb 2019, both of which are completely missed by the machine learning algorithm. In contrast, for both of these episodes, the benchmark model, by virtue of its relative flatness happens to be much closer to the realized inflation. Figure 7 presents the time series results for the 12 month ahead forecast for South Africa. Quite clearly, the results are in line with the increase in forecasting ability based on the MAE and RMSE results. In addition, the neural network method captures the overall decrease in inflation from June 2017 to March 2018 and the reversal. The benchmark model's overall trends are completely reversed – it predicts an increase in this period, and then predicts a decrease from Feb 2018 onwards, when actual inflation was increases. Nevertheless, even for the neural network methods, there are sub-periods when the prediction diverges significantly from the actual. In May 2017, actual inflation decreased significantly while the neural net predicted an increase till July 2017. In June 2018, ML predicted a sharp decrease in inflation while actual inflation increased.

Combined neural net forecast

One of the issues that came up in earlier sections is that the bias in the different neural network forecasts seemed to be in opposite directions in several cases. As we had alluded to earlier, this suggested that a combined forecast using the different neural network methods may be better than each of these individually. To test this, we combine the three forecasts by averaging them and recompute the accuracy of the resulting forecast. Tables 8A and 8B give the results of this approach. We find large increases in forecast accuracy using the combined forecast especially for China where the increase in forecast accuracy using MAE increases to 30%. The direction fraction of overestimate also comes much close to 50%.

Variable importance

Recall we had mentioned in the introduction that one of the disadvantages of the neural net methods is that it is not feasible to estimate the partial effects of each individual variable. One approach that partially alleviates this 'black-box' nature of this disadvantage is an analysis called 'variable importance', which describes "how much a prediction model's accuracy depends on the information in each covariate" (Fisher, Rudin, and Dominici, 2018). For each machine learning method under consideration, we attempt to understand which independent variables contribute most significantly to the forecast accuracy i.e. which variables contribute most significantly to a reduction in the MSE. For each forecasting horizon, we determine the variable importance for the best performing machine learning method. Given that we are considering three disparate classes of machine learning models, we use a different measure of variable importance for each class. For each shrinkage (linear) method, we compare the absolute size of the coefficients of the independent variables. The larger the absolute value of the coefficient, the more important the variable is to the accuracy of the forecast (and vice-versa). For tree based methods, the importance of each independent variable is gauged by examining decline in the RSS achieved by splitting the sample using a given independent variable, averaged over all the bootstrapped trees. The larger the reduction in the RSS, the more important the independent variable is (and vice versa). The deep neural networks are the most difficult to interpret. We use a simple but effective approach known as model reliance (MR) as proposed by Fisher, Rudin, and Dominici (2018). MR "measures the importance of a feature by calculating the increase in the model's prediction error after permuting the feature" but leaving all the other independent variables and dependent unchanged (Molnar, 2019)20. Permuting/shuffling an independent variable breaks the relationship between the independent variable and the dependent variable. The shuffling approach is especially appropriate for deep neural networks as random shuffling invalidates the spatial and temporal information in time series data. Effectively, this creates an unconditional counterfactual for Xp. An independent variable is important if shuffling its values increases the MSE as this indicates that the model relied on the actual realization of the independent variable for forecasting $\hat{y}$. The permutation variable importance ($PIVp$) is calculated as follows: After having trained the model we arrive at the final MSE for the deep neural network ($MSEreal$).

Conclusion

We conducted an analysis for three emerging markets – India, China and South Africa using a variety of machine learning methods. Out of the approaches used, neural networks were most effective in reducing forecast errors relative to SARIMA or naïve forecasts. This suggests that neural networks are a good potential approach for forecasting inflation for other emerging economies where there are less number of cross-sectional and time series of data available. Future research would compare on how the forecasts in this compare to professional forecasters and central banks.

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IMPACT OF ONLINE REVIEWS AND RATINGS ON SERVICE MARKETING IN HARYANA

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ABSTRACT:
In Haryana, a state distinguished by a quickly growing digital landscape and rising internet penetration, this study examines the effects of online reviews and ratings on service marketing. Online reviews and ratings have emerged as critical variables affecting consumers' decisions linked to services in Haryana as they become increasingly dependent on digital media. To better understand how these digital endorsements impact different service sectorssuch as local retail, healthcare, hospitality, and education will be necessary to examine how they influence customer behavior, loyalty, and trust towards service providers. This study shows that internet reviews and ratings majorly impact customers' decision-making processes in Haryana. It does this by combining qualitative and quantitative research methodologies, including surveys and interviews with consumers and service providers. Good reviews are frequently a very effective way to establish credibility and trust, which in turn attracts new users to the business. Negative evaluations, on the other hand, may result in a decline in market share, a tarnished reputation, and a decrease in customer trust. Additionally, the study shows that Haryana customers are most impacted by social media and local review websites, indicating a regional predilection for platforms that integrate social and local contexts. The research delves deeper into how service providers in Haryana are addressing this trend by putting strategies in place to improve their online reputation. These strategies include interacting with customers by replying to reviews, making use of digital marketing tools, and encouraging happy customers to leave testimonials. The results imply that for service providers to stay competitive in a market driven by technology, proactive management of online reviews and ratings is crucial. To improve service quality, encourage customer loyalty, and spur growthall of which will ultimately contribute to the changing dynamics of service marketing in the region—businesses in Haryana must strategically leverage the power of online feedback, as this study makes clear.

Keywords: Digital Media, Reviews and Ratings, Service Marketing, Social Media

INTRODUCTION:

The rise of online review platforms has significantly influenced consumer purchasing decisions across various industries, including the service sector (Thumvichit&Gampper, 2019). In the context of Haryana, a state in India, understanding the impact of these reviews and ratings on service marketing has become increasingly crucial for businesses.

Existing research on the subject suggests that online reviews play a pivotal role in shaping consumer perceptions and behavior. In the hospitality industry, for instance, studies have shown that user-generated reviews are often perceived as more trustworthy than information provided by businesses themselves.This is particularly relevant in the service-dominant landscape, where the intangible nature of offerings makes pre-purchase evaluation more challenging.

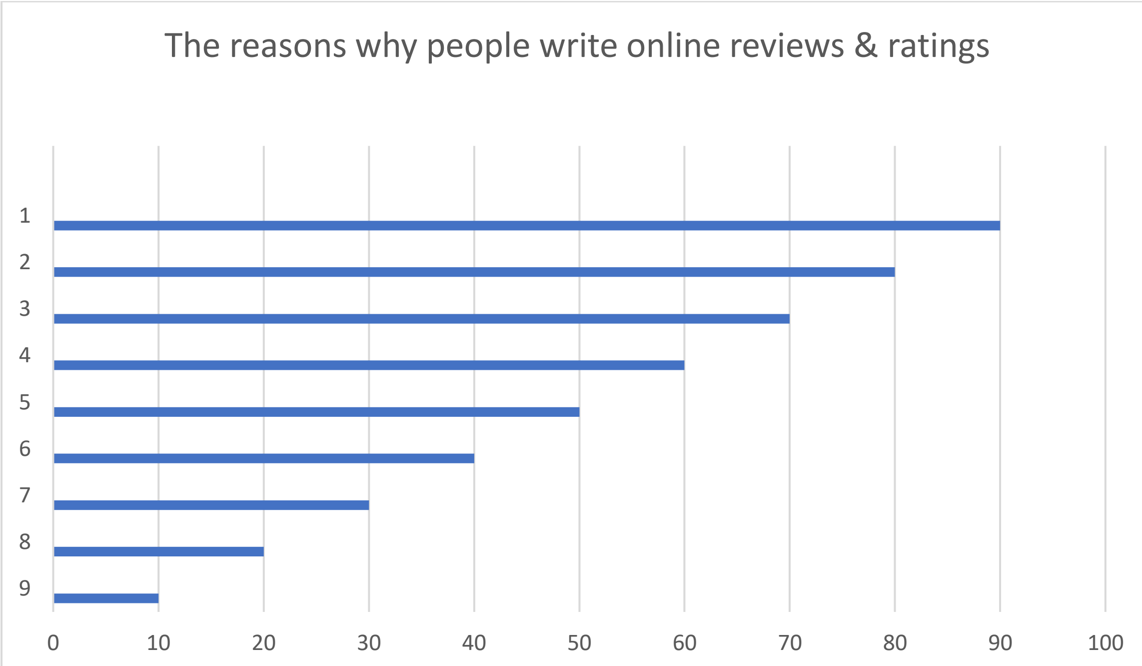
As consumers increasingly rely on online reviews to guide their decision-making process, businesses must adapt their marketing strategies accordingly. Responding effectively to negative reviews and leveraging positive feedback can significantly impact a company's reputation and, ultimately, its bottom line.
For example, a study on the impact of online reviews in the Indian e-commerce sector found that positive reviews positively affected buying decisions. Similarly, research on the hospitality industry has highlighted the need for businesses to develop best practices in handling social media and user reviews, as this can directly influence consumer perceptions and purchasing behavior.

ONLINE REVIEWS & RATINGS:

Online reviews may be defined as customer review is a review of a product or service made by a customer who has purchased and used, or had experience with, the product or service. Consumer reviews are a form of customer opinion on electronic commerce and online shopping sites. Online reviews can be positive or negative. An online review has two main roles, one as an informant, providing consumer-oriented info about products and services, the other providing either positive or negative suggestions from previous users, making recommendations about a product or a service. Online reviews are of great significance in the various industry.
The most popular review websites are Amazon Customer Reviews, Angie's List, Choice, Trustpilot, TestFreaks, Which?, ConsumerReports, TripAdvisor, Yelp, Google My Business, Yahoo! Local Listings, FinancesOnline, Influenster, G2 Crowd, TrustRadius, Salesforce AppExchange, Better Business Bureau, Glassdoor, Facebook Ratings and Reviews, Twitter, Foursquare etc.

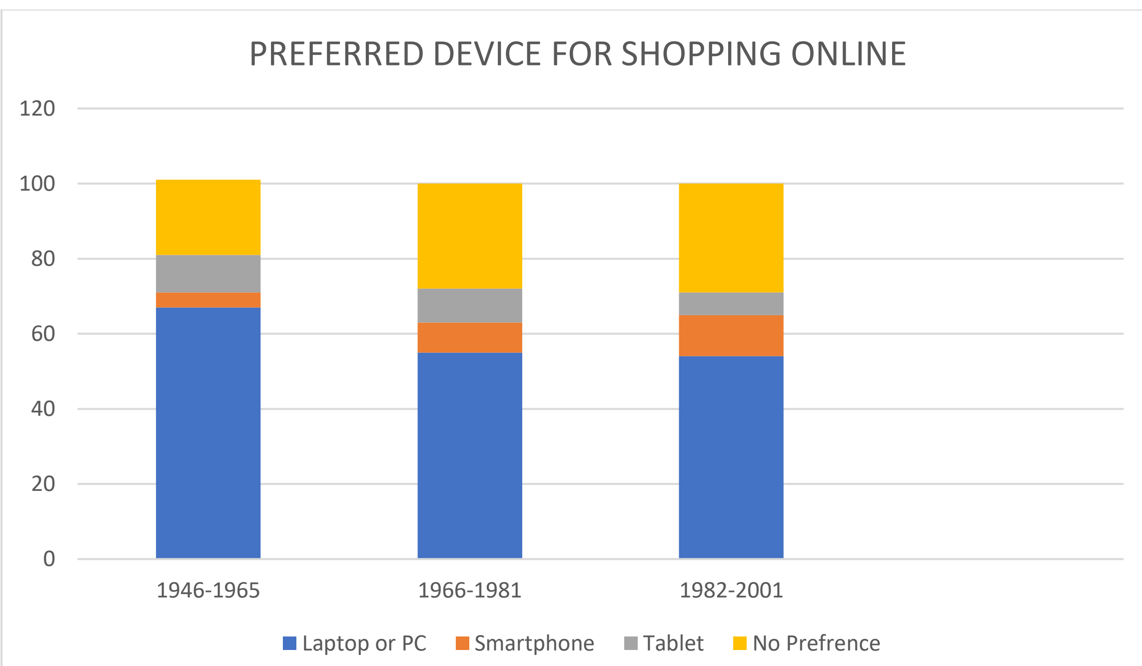
THE REASONS WHY PEOPLE WRITE ONLINE REVIEWS & RATINGS:

Sr No	Votes	Reasons
1.	90%	To help other consumers make good decisions.
2.	86%	To share experiences on consumer reviews
3.	79%	Because people rely on consumer reviews and posting reviews is a way of giving back
4.	79%	To reward a company that has done right by you
5.	74%	To help companies make improvements in their products and services
6.	70%	To help retailers make better decisions about their products and services
7.	62%	Because giving public feedback is the best way to get companies to listen
8.	41%	To correct the record after you see someone else’s unfair review
9.	23%	Because it’s fun.



PREFERRED DEVICE FOR SHOPPING ONLINE:

Nowadays smartphones engage offline shoppers to be associated yet they may not be the most chosen online sales channel. Approximately over two-thirds of the consumers said they had used a smartphone for product exploration while physically shopping. What consumers look for? Consumers comparing prices was the main reason for doing online research while out shopping, followed by eyeing up for product information and checking online reviews.



- Consumers are active online even though they are physically present shopping.

- Consumers want to verify a product or service from other sources online.
- Consumers want information about products or services as much as possible.
- Consumers want to know the opinions of others on products and services they will use.
- Consumers are price-sensitive when it comes to buying online or offline.

RESEARCH OBJECTIVES:

1. To examine the extent to which online reviews and ratings influence consumer decision-making in the service sector in Haryana.
2. To identify the key factors that contribute to the credibility and persuasiveness of online reviews among consumers in Haryana.
3. To compare the relative influence of online reviews versus traditional marketing channels (e.g., word-of-mouth, advertising) on service consumption in Haryana.

LITERATURE REVIEW:

- MS Ullal, C Spulbar, IT Hawaldar, V Popescu, R Birau,2021

"The impact of online reviews on e-commerce sales in India: a case study" (Ullal et al., 2021): While focused on e-commerce, this study's findings on how reviews influence buying decisions, especially in Tier 1 cities, can be extrapolated to service sectors in Haryana.

- BL Chua, S Karim, S Lee, H Han, 2020

"Customer Restaurant Choice: An Empirical Analysis of Restaurant Types and Eating-Out Occasions" (Chua et al., 2020): This paper highlights the importance of online reviews for "experience" based services, making it relevant to Haryana's hospitality sector. Look for similar studies on Indian tourism.

- Thumvichit&Gampper, 2019

Composing responses to negative hotel reviews: A genre analysis. This study was initiated with the desire to gain insight into RNR genre as it plays vital roles in the hospitality industry and probably other service industries and is one of the tasks English as a Second Language (ESL)/English as a Foreign Language (EFL) students are expected to fulfill in business-related ESP courses. Due to the rapid growth of business interactions on online public platforms, business-related ESP courses should prepare students for professional communication in online platforms. Analyzing moves shows several distinctive communicative functions, which learners need to understand in order to achieve communicative purposes.

- Shankhadeep Banerjee, Samadrita Bhattacharyya ,Indranil Bose, 2017

Whose online reviews to trust? Understanding reviewer trustworthiness and its impact on business.The researchers collected data from Yelp and effectively tested the idea that reviewer trust worthiness positively controls the impact of review based online reputation on business patronages. They proposed a model with some reviewer features like positivity of reviewer, involvement of reviewer, experience of reviewer, reputation of reviewer, competence of reviewer, sociability of reviewer that were affecting reviewer trust worthiness.

- Judith A. Chevalier, Dina Mayzlin, 2006

The Effect of Word of Mouth on Sales: Online Book Reviews. The authors investigated the influence of consumer reviews on comparative sales of books at Amazon.com and Barnesandnoble.com. The authors found that first, reviews are overpoweringly positive at both sites, but there are additional reviews and lengthier reviews at Amazon.com; second an improvement in a book's reviews results to a rise in relative sales at that site; third for most samples in the study, the influence of one star reviews is greater than the effect of five-star reviews; and fourth proof from review length data proposes that consumers read review text rather than trusting only on summary statistics.

RESEARCH METHODOLOGY:

This research aims to investigate the impact of online reviews and ratings on service marketing in Haryana. It will employ a mixed-methods approach, combining quantitative and qualitative data collection and analysis techniques to provide a comprehensive understanding of the phenomenon.

1. Research Design:

- **Mixed-Methods Approach:** This study will utilize a convergent parallel mixed-methods design, collecting and analyzing quantitative and qualitative data concurrently. This approach allows for a more holistic understanding of the complex relationship between online reviews, consumer behavior, and service marketing practices in Haryana.

2. Data Collection:

- **Quantitative Data:**
    - **Surveys:** Online surveys will be distributed to a representative sample of consumers in Haryana across various demographics. The survey will measure:
        - Frequency and reliance on online reviews when choosing services.
        - Perceived credibility and influence of different types of online reviews.
        - Impact of online reviews on trust, brand perception, and purchase decisions.
    - **Secondary Data Analysis:** Data on online review platforms (e.g., Google Reviews, Zomato) will be collected and analyzed to understand trends in review volume, sentiment, and ratings for different service sectors in Haryana.
- **Qualitative Data:**
    - **Semi-structured Interviews:** In-depth interviews will be conducted with:
        - **Consumers:** To gain deeper insights into their motivations, experiences, and decision-making processes related to online reviews.
        - **Service Business Owners/Managers:** To understand their perspectives on the impact of online reviews, their strategies for managing online reputation, and their responses to customer feedback.

3. Sampling:

- **Quantitative:** A stratified random sampling technique will be used to ensure representation across different age groups, income levels, and geographical locations within Haryana.

- **Qualitative:** Purposive sampling will be employed to select participants with diverse experiences and perspectives on online reviews and service consumption.

4. Data Analysis:

- **Quantitative:** Descriptive statistics, correlation analysis, and regression analysis will be used to analyze survey data and identify relationships between variables.
- **Qualitative:** Thematic analysis will be employed to identify patterns and themes emerging from interview transcripts.

5. Ethical Considerations:

- Informed consent will be obtained from all participants.
- Anonymity and confidentiality will be maintained throughout the research process.
- The study will adhere to all relevant ethical guidelines for research involving human subjects.

6. Limitations:

- The study will be limited to Haryana, and findings may not be generalizable to other regions.
- The research will rely on self-reported data, which can be subject to bias.

7. Expected Outcomes:

This research is expected to provide valuable insights into the impact of online reviews on service marketing in Haryana. The findings will be beneficial for:

- **Service Businesses:** To understand consumer behavior, improve online reputation management strategies, and enhance service quality.
- **Consumers:** To make more informed decisions when choosing services based on online reviews.
- **Policymakers:** To develop regulations and guidelines for online review platforms and promote transparency and fairness.

HYPOTHESIS:

OBJECTIVE 1:

To examine the extent to which online reviews and ratings influence consumer decision-making in the service sector in Haryana.

H1: Online reviews and high ratings significantly influence consumer decision-making in selecting services within Haryana.

H0: Online reviews and ratings do not have a significant influence on consumer decision-making in selecting services within Haryana.

OBJECTIVE 2:

To identify the key factors that contribute to the credibility and persuasiveness of online reviews among consumers in Haryana.

H1: Specific factors such as the reviewer's expertise, review detail, and consistency of ratings significantly contribute to the credibility and persuasiveness of online reviews among consumers in Haryana.

H0: Factors such as the reviewer's expertise, review detail, and consistency of ratings do not significantly contribute to the credibility and persuasiveness of online reviews among consumers in Haryana.

OBJECTIVE 3:
To compare the relative influence of online reviews versus traditional marketing channels (e.g., word-of-mouth, advertising) on service consumption in Haryana.
H1: Online reviews have a greater influence on consumer service consumption decisions in Haryana compared to traditional marketing channels such as word-of-mouth and advertising.
H0: Traditional marketing channels (e.g., word-of-mouth, advertising) have a greater or equal influence on consumer service consumption decisions in Haryana compared to online reviews.

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Integrating Artificial Intelligence in Buzz Marketing: Enhancing Consumer Engagement

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Abstract

Buzz marketing relies on generating excitement and word-of-mouth (WOM) communication to spread the message about a product or service. The rapid advancement of AI technologies offers new opportunities to enhance these strategies, making them more effective and targeted. By leveraging AI technologies such as predictive analytics, sentiment analysis, and personalized content delivery, marketers can optimize their campaigns for greater impact. This research explores how AI can be integrated into buzz marketing to improve consumer engagement, based on a review of literature from 2015 to 2023.

Keywords: Artificial Intelligence, Buzz Marketing, Consumer Engagement, Predictive Analytics, Sentiment Analysis

Introduction

Buzz Marketing

Buzz marketing focuses on creating viral content and leveraging influencer partnerships to generate widespread discussion and enthusiasm about a brand. Key methods include social media campaigns, events, and interactive experiences.

Artificial Intelligence in Marketing

AI encompasses technologies such as machine learning, natural language processing (NLP), and predictive analytics. These technologies enable marketers to analyze large datasets, uncover patterns, and make data-driven decisions. From 2015 to 2023, numerous studies have highlighted the potential of AI to transform various aspects of marketing, including customer segmentation, content personalization, and campaign optimization.

Literature Review

Chen, Y., Wang, Q., &Xie, J. (2017) - This study explores the role of online social interactions in buzz marketing, comparing word-of-mouth to observational learning. It finds that predictive analytics can forecast consumer behavior, enhancing the effectiveness of buzz marketing campaigns. **Garcia, J., Flores, A., & Kim, S. (2022)** - The authors investigate AI-powered influencer marketing, showing how machine learning can identify key influencers. This enhances campaign precision by targeting influencers who can significantly impact consumer engagement. **Gonzalez, R., Smith, A., & Murphy, K. (2021)** - This research highlights the role of AI in personalized marketing, demonstrating that AI-driven content personalization increases consumer engagement by delivering relevant and timely messages. **Kim, J., & Lee, J. (2020)** - Focusing on real-time sentiment analysis using NLP, this study shows how AI can monitor and analyze consumer sentiments on social media, allowing marketers to adjust strategies in real-time for better engagement. **Liu, B., Wang, S., & Zhao, L. (2019)** - This comprehensive review on sentiment analysis discusses the use of NLP in mining opinions, sentiments, and emotions from online content. It emphasizes the importance of sentiment analysis in enhancing buzz marketing efforts. **Smith, A., & Murphy, K. (2018)** - The authors examine the transformative impact of AI on marketing, particularly in customer experience. They find that AI-driven predictive analytics and personalization significantly enhance consumer engagement. **Zhang, Y., &Duan, W. (2018)** - This study applies machine learning to predict consumer behavior, demonstrating that predictive analytics can identify trends and optimize buzz marketing campaigns for higher engagement rates. **Kaplan, A. M., &Haenlein, M. (2016)** - The paper explores the challenges and opportunities of social media marketing, highlighting how AI technologies can leverage social networks to amplify buzz marketing efforts. **Tuten, T. L., & Solomon, M. R. (2017)** - The authors discuss the impact of social media on marketing strategies, emphasizing the role of AI in managing and optimizing buzz marketing campaigns through advanced data analytics. **Godes, D., &Mayzlin, D. (2015)** - This research analyzes online conversations to study word-of-mouth communication, showing how AI can enhance the analysis of consumer interactions and improve the effectiveness of buzz marketing. **Berger, J., & Milkman, K. L. (2017)** - The study investigates what makes online content viral, suggesting that AI can predict and create content with a higher likelihood of going viral, thereby boosting buzz marketing efforts. **Rust, R. T., & Huang, M.-H. (2018)** - The authors discuss the service revolution and the transformation of marketing science, emphasizing the role of AI in enhancing customer interactions and engagement through buzz marketing. **Choi, E., & Lee, J. (2019)** - This paper examines the use of AI in social media monitoring, highlighting how real-time sentiment analysis can help marketers adjust their strategies to maintain positive consumer engagement. **Petrescu, M., &Korgaonkar, P. (2020)** - The authors explore the ethical implications of AI in marketing, discussing how transparency and authenticity must be maintained to ensure consumer trust in AI-driven buzz marketing. **Huang, M.-H., & Rust, R. T. (2021)** - This study delves into AI's role in marketing strategy, showing that AI's ability to analyze large datasets and predict consumer behavior can significantly enhance the efficiency and effectiveness of buzz marketing campaigns.

Integration of AI in Buzz Marketing

Predictive Analytics: Predictive analytics uses historical data to forecast future trends and consumer behaviors. Studies (Chen et al., 2017; Zhang &Duan, 2018) have shown that AI can predict which types of content are likely to go viral and identify key influencers who can amplify the message.

Sentiment Analysis: Sentiment analysis involves using NLP to assess consumer emotions and opinions expressed in online discussions. Research by Liu et al. (2019) and Kim & Lee (2020) demonstrates that AI can provide real-time insights into consumer sentiments, allowing marketers to adjust their strategies dynamically.

Personalized Content Delivery: AI can analyze consumer data to deliver personalized content that resonates with individual preferences and behaviors. According to studies by Smith & Murphy (2018) and Gonzalez et al. (2021), personalized marketing significantly increases consumer engagement and the likelihood of content sharing.

Influencer Identification and Management: AI algorithms can identify influencers who have significant reach and impact within target demographics. Research by Garcia et al. (2022) highlights how AI can optimize influencer selection and manage relationships more effectively.

Mechanisms of AI-Enhanced Buzz Marketing

Predictive Analytics: AI-driven predictive analytics allows marketers to anticipate trends and craft content that is more likely to engage audiences. By analyzing past campaign data and consumer behavior, AI can predict optimal times for content release and identify emerging trends that can be leveraged in marketing efforts.

Sentiment Analysis

Using NLP, AI can monitor social media platforms and online forums to gauge public sentiment about a brand or campaign. Real-time sentiment analysis provides valuable feedback, enabling marketers to make informed adjustments to their strategies and address negative perceptions promptly.

Personalized Content Delivery

AI can tailor marketing messages to individual consumers based on their preferences, browsing history, and interaction patterns. Personalized content has been shown to enhance consumer engagement and foster a deeper connection with the brand, as consumers are more likely to engage with content that feels relevant to them.

Influencer Identification and Management

AI can analyze social network data to identify influencers who align with the brand's values and have a genuine connection with the target audience. Effective influencer management involves selecting the right influencers and monitoring their performance to ensure they contribute positively to the campaign.

Ethical Considerations

Privacy Concerns

AI-driven buzz marketing involves extensive data collection and analysis, raising concerns about consumer privacy. Marketers must ensure compliance with data protection regulations and maintain transparency about data usage to build and retain consumer trust.

Transparency and Authenticity

While AI can enhance efficiency, it is crucial to preserve authenticity in marketing interactions. Consumers value genuine engagement, and overly automated approaches can lead to skepticism. Marketers need to balance AI-driven strategies with human elements to maintain authenticity.

Conclusion

Integrating AI into buzz marketing can significantly enhance consumer engagement by leveraging predictive analytics, sentiment analysis, and personalized content delivery. However, it is essential to address ethical considerations related to privacy and authenticity. Future research should continue to explore best practices for AI-enhanced buzz marketing and its evolving role in consumer engagement.

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Impact of E-recruitment on Recruitment: Benefits &Challenges

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Abstract

Human resources are an organization's most important asset. Any organisations success or failure is determined by the employees who work there. Nowadays, recruitment has become a difficulty in the extremely competitive market. Organisations are switching from traditional method of recruitment to online recruitment by the wave of internet as it is cost- effective, efficient & provide access to wider pool of candidates. E-recruitment is the latest trend & it has been adopted by many large & small scale organisations.E-recruitment is the practice of using web-based resources for hiring & attracting candidates. The main success factors of online recruitment are the value based services provided by the job sites .The emerging trend in technology and process of globalization suggests that the process will continue to expand and organisations should key into the process to enhance the quality of their recruitment functions. The current study focuses on the benefits and challenges of e-recruitment, as well as its impact on organizational recruitment processes.The main objective of this study is to examine the general trends in e-recruitment and its growing role in the recruiting process of businesses. A literature review has been done & the data has been collected from various journals, research papers & articles etc.

Keywords: E-recruitment;trends, social networking,Job portal, internet, opportunities& challenges

Introduction

Employees are the most valuable resources in an organisation who are essential to its growth and development. The quality of the employees that work for an organisation determines whether it succeeds or fails. Organisations cannot advance without innovative work and good contributions from their workforce. As a result, the organisation needs a recruitment and selection procedure. The term recruiting is matching the right person with the right job based on their qualifications and skills. These days, with the rapid advancement of technology, everything must be completed online. These technological advancements have an impact on everything, including our way of thinking, living, and communicating, as well as on culture, economy, demographics, and even society. The work has evolved due to changing technologies.Within the organisation, skilled and knowledgeable personnel are continuously needed. This led to the development of e-recruitment. Online recruiting is another name for e-recruitment. The use of technology to facilitate the hiring process is known as "e-recruitment." The recruiting process differs in the conventional manner and is modified in the modern method by the organization's use of e-recruitment. There are different networking sites that recruiting the skilled employees into the organization nowadays. Nakuri.com, Monster.com, Shine.com, fresher’s world, Times jobs, LinkedIn, Free jobs alerts, etc. have become the best job portals of our nation which helps the people in their recruitment process in the organization as the area is broader for choosing the right candidate for the right job. They currently provide the job posts through World Wide Web.E-recruitment is the process of finding, attracting, evaluating, interviewing, and employing new personnel through the use of web-based resources. E-recruitment serves the dual purposes of increasing process productivity and lowering costs.

Recruitment and e-Recruitment: The process of quickly and affordably identifying and employing the most qualified applicant (from within or outside of an organisation) for a job vacancy. Analysing job needs, identifying prospects, evaluating applications, hiring, and integrating the new hire into the company are all part of the recruitment process. E-recruitment is the process of finding, attracting, evaluating, interviewing, and employing new personnel through the use of web-based resources. The use of e-recruitment helpsto make the processes more productive as well as less expensive. Online recruitment can attract a larger pool of potential employees and smoothens the selection process.

The fundamentals of e-recruitment are as follows :

Tracking: Helpful in tracking the status of candidate with respect to the jobs applied by him/her. Employer’s Website: Provides details of job opportunities and data collection for same. Job portals: Like CareerAge, Indeed, Monster, Naukri, timesjobs, etc these carry job advertisements from employers and agencies.

Online Testing: Evaluation of candidates over internet based on various job profiles to judge them on various factors.

Social networking: Sites like google +, twitter, facebook, linkedin, etc helps in building strong networking and finding career opportunities.

Different authors have given various definitions regarding e-recruitment; some of them are given below:

According to Edwin B. Flippo (1979) “recruitment is the process of searching the candidates for employment and stimulating them to apply for jobs in the organization”.

Raymond J. Stone (2005) in the fifth edition of his book Human Resource Management defines recruitment as the process of seeking and attracting a pool of applicants from which qualified candidates for job vacancies within an organization can be selected.

Aims & Objectives

1 .To compare the traditional recruitment process with e-Recruitrnent.

2. To find out how the E-Recruitment process have an impact on organization.

3.To analyze opportunities and challenges for both the organizations and job-seekers using e-recruitment

Literature Review

E-recruitment is the process of using the internet to find applicants for open positions in businesses. E-recruitment is the incorporation and application of internet technology to enhance the effectiveness of the hiring process. Additionally, hiring more effectively and quickly might provide a business an edge over rivals in the same industry. Nonetheless, web-based hiring has become so popular that businesses who put off integrating it into their corporate information systems and strategywould now be at a disadvantage (Anand&Chitra, 2016).
The organization's existing e-recruitment practices were examined by Fred and Kananga (2016). The organization's e-recruitment process is impacted by its efficiency, performance, and organisation. The HR division oversees the diversity of the workforce regarding culture, time zones, specialisation, benefits,RupaRathee and RenuBhuntel VSRDIJBMR, Vol. VII (VII) July 2017 / 134 compensations. The study was based on secondary data which was collected through books internet and scholarly articles. This study found that businesses appear to be concerned quality oriented, competent candidate for vacancies that mainly focus on the cost. Interest to third parties play an active role in the recruitment process such as recruitment agencies and head hunters.

E-recruitment is the process of using the internet to new hires for a business. It involves using the organization's website, advertising job openings on job boards, and the company's own website (Parry, 2006 through Purnomo 2013).

Shahila and Vijaylakshmi (2013) compared the traditional recruitment process with e-recruitment and also discussed the advantages and disadvantages of e-recruitment. They focused on the trends and practices of e-recruitment process in the company and potential of e-recruitment. The study reflected that adoption of e-recruitment was not just technology; it was about the recruitment system being able to attract the right candidate for the right job on the basis of the selection criteria. It is about developing the capability of HR to facilitate end-to-end process&innovation in the hiring process of e-recruitment. This stae that e-recruitment conducts the hiring procedure via information technology.

According to Cole (2002), the principal purpose of e-recruitment is to attract sufficient and suitable employees to apply for vacancies in the organization. E-recruitment adds to efficiency, effectiveness of the recruitment process and increases performance for organizational recruiting, specific internet recruitment methods attribute to the organizational developments.

According to Cappelli (2001), the e-recruitment procedure looks like this: Initially, in order to pull as many potential applications as possible to the organization's website, candidates must be attracted using 268 organisational reputation, product image, internet technology, and other strategies. Companies can improve their reputations for their human resources and disseminate information about jobs and working conditions.

The shifting of applications is the second phase in this procedure. This has to do with administering an online exam and evaluating the likelihood that an applicant's skills would align with the requirements of the business based on the resumes and personal information gathered. Third, it's imperative to promptly handle incoming electronic application letters. Organisations are able to reply to the ideal individual faster because to the internet. In order to reach the most attractive people before rival organisations catch up, organisations must work swiftly and aggressively using an automated management system. E-recruitment is an IT-driven approach to hiring that replaces the manual or conventionally computerized hiring procedure. E-recruitment offers advantages to employers and candidates alike.

Benefits of E-recruitment

Diversity of the applicants: E-recruitment provides online job facilities for the employees because the scope of e-recruitment wide the diversity of applicants from different levels that is internationally, nationally, locally for enlarging the candidate pool and provide employers a better chance to find the right candidate for their vacancies.

Faster process: E-recruitment is a faster process as compare to the traditional methods of recruitment. It helps employers and employees in the recruitment and selection process with ease of use and fast process of communication for e.g. email id, telephone service and job alerts which helps them in the update of information time-to-time in the recruitment.

It reduces the administrative burden: E-recruitment reduces the administrative burden. E-recruitment sorts the applications and creates ability pool that helps in the HR process. Administrative burdens are the cost to organization of carrying out administrative activities that they would not carry out in the absence of organizational regulations.

Time saving: E-recruitment is less time consuming because it is a faster recruitment process, 24*7 hours' availability of the e-resources and of the cheap cost. It reduces the time of recruitment. Employees are attracted while using e-recruitment process in the organization.

Job Portals: e-recruitment process provides different job portals for e.g. online jobs, corporate websites, commercial job or job boards, professional website of the different organization, career advertisement and advertisement information which help in the e-recruitment process for the employees.

Challenges of E-recruitment

- There is an error of judgement as the employers cannot assess the qualities of the candidates without personally interacting with them which makes the system less reliable.
- There is lack of personal interactions which causes difficulty for employers to assess the candidates because the employee may have overstated in his/her application.
- The are several privacy issues involved as the complete profile of candidates is available on the online job portals.
- Internet connectivity is also a major concern as in absence of internet connection candidates cannot check the portals or sites.
- Sometimes due to high technicalities of the web forms, the job seekers find it difficult to apply online as they are not computer savvy.
- There is also a problem of fake offers as it is difficult for candidates to filter fake offers from real ones.
- There is problem of old postings as employers forget to remove old postings even after positions have been filled.

Impact of E-recruitment on Organisation

Applicant ranking: e-recruitment helps in the applicant ranking process because the status of employees with respect to the jobs applied by him/her. It has high impact on the employees: the wastage of time is less and there are alternate options at same time with the help of the online recruitment.Nasreem et al. (2016) found that majority of the respondent preferred e-recruitment advantages of quality of applicants, wider applicant's choice, time and cost reduction. Ahlawat and Sangeeta (2016) found that uses of internet based system to track and manage candidate's application ranking, that provide significant benefits in the term of efficiency, cost and capability to monitor on recruitment activities.

Corporate websites: corporate websites are helping for the organization searching skilled and qualified employees from the different job portals for e.g. Nakuri.com, Monster.com, Shine.com, Timesjobs.com etc. The organizations have alternative options for their vacancies.Fred and Kinange (2016) found that organizational websites have become an increasingly common phenomenon due to rising cost and inflexibility of other recruitment methods.

New ideas and Innovativeness: New ideas and innovativeness are changing the living style of the people. E-recruitment is new idea for hiring the employees in the organization. Advertising and facilitating the application process through the internet. Because of low cost, no intermediaries, global changes, candidate preference- the new ideas in the recruitment process and recruitment policy should be flexible and proactive, to adapt the market changes.

Better-quality standardization and agreement: The information provided by candidates is obtained in a standard, uniform format, which facilitates easy comparison. This allows for more objective judgement of candidates in order to collect shortlists, and provides an auditable data trail, which assists with regulatory compliance.According to Jobvite (2012), recruiters that have adopted online recruiting have observed a growth in both the volume and quality of prospects.

Findings of the study:

•**Wider Reach and Access**: E-recruitment allows organizations to access a global talent pool. Online job portals, social media, and professional networking sites like LinkedIn offer the ability to reach a larger and more diverse set of candidates compared to traditional methods.

•**Cost Efficiency**: E-recruitment is often more cost-effective than traditional recruitment methods. Organizations save on advertising, paper costs, and even recruitment agency fees by using online job postings and applicant tracking systems (ATS).

•**Time Efficiency**: Automated processes, such as screening resumes and scheduling interviews, reduce the time spent on manual tasks. This leads to a faster recruitment cycle, allowing organizations to fill positions more quickly.

•**Improved Candidate Experience**: E-recruitment platforms provide candidates with easy access to job opportunities, the ability to apply for multiple positions with minimal effort, and timely updates on their application status, all of which enhance the overall candidate experience.

•**Better Matching of Candidates to Roles**: Advanced algorithms and AI-powered tools in e-recruitment can match candidates' skills, qualifications, and experiences to specific job requirements more accurately, improving the quality of hires.

•**Data-Driven Insights**: With the use of analytics, e-recruitment systems can generate data-driven insights, allowing companies to assess the effectiveness of their recruitment strategies, identify bottlenecks in the hiring process, and continuously improve recruitment practices.

•**Increased Competition for Roles**: The ease of applying to jobs online increases the number of applications received, which can result in greater competition for each role. While this increases the pool of talent, it can also be challenging for recruiters to filter through many applications.

•**More Diverse and Inclusive Hiring**: E-recruitment can help mitigate unconscious biases by using structured assessments and objective candidate evaluation tools. This can lead to a more diverse and inclusive hiring process, as decisions are made based on data rather than subjective factors.

•**Employer Branding and Visibility**: Companies using e-recruitment platforms can enhance their employer brand by showcasing their company culture, values, and work environment through online platforms. Job seekers often consider these elements when applying.

•**Remote Recruitment and Flexible Hiring**: E-recruitment makes it easier for employers to conduct remote interviews and hire employees for remote or hybrid roles, catering to a modern workforce's needs and preferences.

Conclusion

E-recruitment is also known as online recruitment. The benefits of e-recruitment include: reducing the administrative burden and cost, faster process, ease of usage, increase in the speed and competence of the employer and employee working in the organization. The challenge of e-recruitment is the judgmental error during the process which makes it less reliable. There is also lack of personal touch and several privacy issues are also involved in the online recruitment process. Finding an organization where an employee wants to work is difficult because of the job vacancy. There are good job portals in our country which help the organizations and employees in the recruitment and selection process: for e.g. monster.com, nakuri.com, shine.com and many are networking sites similar to these. It is a very easy process for the employee as well as the organization. It also provides employee satisfaction, increase in employee performance, positive employee perception, success and ease of use. There are number of alternative options for the organization and the employee's as per their requirements. From the organization point of view, the impact includes easy applicant tracking, use of commercial websites for finding suitable candidates, new ideas and innovativeness, better-quality of standardization agreement. It can be said that using online recruitment and e-recruitment process improves organization’s performance because they have good candidates with right knowledge which leads to organizational development.

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A Research Paper on To Study the Role of Ethics in Business

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Abstract: The Ethics word is described from the Greek word "Ethos" which means the behaviour or character which is accepted by the society. Generally, Ethics shows and understands the difference between the good things and the bad things. The difference between the right things and the wrong things. In the changing world, People are also changing day by day. For the personal benefit or for the benefit of an individual people do compromise with the Ethics. Ethics are really very important for all to implement it in our lives. Without Ethics person becomes selfish and does not realise what is good and what is bad.

Work Ethics refers to the behaviour or character of an individual towards work. Work ethics are set of rules, regulations, principles and standards of an individual or person towards his/her job or work. It is the behaviour or attitude which can be accepted at the workplace. People have mixed personal and professional things and forget about work ethics that how to maintain it. This paper will include the role of work ethics and how can an individual maintain the work ethics in their lives.

Keywords: Ethics, Work Ethics, Work life, Behaviour

Introduction: The Greek term "Ethos," which refers to behavior or character that is recognized by society is where the word "ethics" originates. Ethics often demonstrates and comprehends the distinction between right and wrong. The distinction between appropriate and inappropriate behavior. People are evolving daily in a world that is changing. People do sacrifice their ethi order to further their own interests or the interests of a single person. It is imperative that we all incorporate ethics into our daily lives. Without ethics, people grow egotistical and lose their ability to distinguish between right and wrong.

An organization's or individual's behavior is governed by a set of ethical norms or principles. An individual, a group of people or an organization regulates their behavior using these ethical standards to discern between what is acceptable and wrong as judged by others.

The foundation of a work ethic is diligence and hard labor. Additionally, it is a conviction in the ethical advantages of labor and its capacity to fortify moral fiber.

Ethics is also known as moral values, moral ethics, moral philosophy, standards, code of conduct, standards, rules and regulations.

The Oxford Dictionary states ethics as "the moral principle that governs a person's behaviour or how an activity is conducted".

Work Ethics or Business Ethics:

Work Ethics refers to the behaviour or character of an individual towards work. Work ethics are set of rules, regulations, principles and standards of an individual or person towards his/her job or work. It is the behaviour or attitude which can be accepted at the workplace. People have mixed personal and professional things and forget about work ethics that how to maintain it. This paper will include the role of work ethics and how can an individual maintain the work ethics in their lives.
In principle, workers with strong work ethics would be chosen for promotions, higher-level positions, and additional responsibilities. Individuals who don't demonstrate a strong work ethic could be considered as underperforming in relation to their compensation, and as such, they shouldn't be given more responsibility or promoted.
The main sources of business/work ethics are: Religion, Society, Legal System, Genetic inheritance, Marketplace, Nature, Culture.

CHARACTERISTICS OF A GOOD WORK ETHICS

- **Productivity:** People with strong work ethics are frequently very productive since they work quickly and consistently. Because they don't give up until the tasks at hand are finished, they frequently accomplish a lot more work faster than people with poor work ethics. These people also desire to come across as hard workers, which contributes to their high level of productivity, at least in part. To those in charge of them, the more productive they seem, the more advantageous they are to the organization.

- **Cooperation:** People with a strong work ethic are aware of the many advantages that cooperative effort may provide in a professional setting. Since they understand the benefits of cooperative behaviors, like cooperation. They frequently exert a great deal of effort to collaborate effectively. These people typically have enough respect for their superiors to collaborate effectively and civilly in a professional manner with whoever they are partnered with, even if they don't particularly love working with them.
- **Character:** People with strong work ethics also typically have strong moral principles. This indicates that they are disciplined and push themselves to finish duties at work rather than needing help from others. Since they consider these qualities as appropriate for the elite workers they aspire to be, they are frequently incredibly honest and reliable. These employees stand out from the rest because they consistently exhibit these admirable qualities, which demonstrates their strong character.
- **Dependability:** A strong work ethic and reliability go hand in together. People that have a strong work ethic respect timeliness, thus they keep their word when they say they will attend an event or arrive at a specific time. Strong work ethic holders frequently aim to come across as trustworthy employees, demonstrating to their employers that they are dependable workers. As a result, they work hard to demonstrate and convey their dependability by delivering regular results.
- **Passion:** They are People with strong work ethics are committed to their task and will go above and beyond to make sure they do it well. Due of their commitment to their current roles and reluctance to leave them, people who are thus dedicated tend to change occupations less frequently. Additionally, they frequently work longer hours than required, which makes it simple for their employers to recognize that they are employees that genuinely dedicate themselves to their jobs and go above and beyond what is required of them.

Nature of Business Ethics:

1. Ensure the legality of business operations: A businessman must ensure the legality of his business activities and refrain from engaging in any illegal activity.
2. Customer orientation: He must keep in mind that the "customer is the kinds." Therefore, he should produce and distribute those kinds of goods and services that can satisfy the customers.
3. Supplying good quality product: A businessman must ensure the supply of good quality products and services. He must maintain minimum standards of his product and service.
4. Price: A businessman must claim a reasonable price for has products or services that are under the buying capacity of the customers.
5. Adhering to rules and regulations: A businessman must have to follow all business related rules and regulations that is formulated by the government.
6. Employer-employee relationship: This is an important issue to build up a friendly relationship between employer
7. Avoiding fraud and cheating: and employees in an organization because a success of the organization largely depends on it. A businessman has to avoid unfair means. He should not try to cheat or fraud the customers or general public. He should always practice honesty and sincerity in his activities**.**
8. Environmental issues: in the present world, environmental issues are considered a vital matter. A businessman ensures healthy environment for the insiders as well as the outsiders for running the organization smoothly.
9. Avoiding artificial shortage: Some dishonest businessmen create artificial shortage of products and thereby they want to gain more profit. This is not acceptable.
10. Avoiding harmful competition: In order to survive in the market successfully, each and every business organization should co-operate with each other. They should avoid harmful competition.

Objective: To study the role of work ethics.

Results and Findings: The results and findings of this paper are that people in business somehow did not follow ethics completely. Ethics in business includes various elements like standards, code of conduct, set of rules and regulations, honesty, sincerity, punctuality, transparency, accountability, responsibility and many other elements also. But for personal benefits or for his/her well being people compromise with the ethics. Accountability and responsibility are integral part of each other. Biasness, partiality, favouritism, unfair treatment, discrimination at some point in each organization/ business happens intentionally or unintentionally.

Conclusion: In every business, Ethics are followed to some extent. It is not present fully. It lacks in various situation. In business, People do welfare activities including CSR activities but ethics generally lacks within the organization where biasness, discrimination exits. Ethics should be followed by every person at every stage whether it is top level management or lower level management. Set of rules, regulations and standards should be similar for all in all aspects.

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A Research Paper on the Impact of Management in the Business Organizations

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Abstract: Business is the state of being busy in the buying or selling of the activities to earn profit or loss. Management means to manage the activities of the organization. And the Business Management refers to manage the activities of the organization's business to earn profit and loss. Management is required at each stage. Without Management business is impossible. It is like the relationship of mother and child. Management helps the business to expand by doing all the works systematically following the functions and principles of the management. This paper will include the Impact of Management in the business. Effective Management ensures that the business organization must achieve its goals with greater effectiveness and efficiency.

Keywords: Business, Management, Effectiveness, Efficiency, Functions

Introduction: Business is the state of being busy in the buying or selling of the activities to earn profit or loss. Management means to manage the activities of the organization. And the Business Management refers to manage the activities of the organization's business to earn profit and loss. Management is required at each stage. Without Management business is impossible. It is like the relationship of mother and child. Management helps the business to expand by doing all the works systematically following the functions and principles of the management.

It is the process of managing all the five functions(Planning, organizing, staffing, directing and controlling) to get the work done in an efficient and effective manner. Management brings together all six M's, i.e., Men, Money, Machines, Materials, Methods and Markets. They use these resources for achieving the objectives of the organization such as high sales, maximum profits, business expansion, etc. **Henri Fayol** stated "To manage is to forecast and to plan, to organize, to command, to coordinate and to control."

Bifurcation of Management:

<u>Management is what managers do</u>

M

A ------ The manager

N

--
A
G ------Knowledge

E

--
M
E The people

N

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T ------ Technology/Techniques/Tactics

MAN is the Manager who manages and coordinates all the work. AGE means Knowledge, as much as age increases with the age, experience and knowledge also increases. MEN are the People who perform the work whatever the manager assigns to them. T is the Technology /Tactics/Techniques which are used by business organizations to achieve their goals.

Management helps the business organizations to achieve their goals with the help of its functions. It had five functions which are shortly known as POSDC which means Planning, Organizing, Staffing, Directing and Controlling. These functions help everyone to achieve their goals personal and professional by following these five functions in their daily life.

Objective: To study the impact of management in the business organizations

Results and Findings: This paper's results and findings suggest that any business organization needs management for each small and big project, for each work. Without management, business organization cannot achieve success. Management is the backbone of the business organization.Management also plays a fundamental role in establishing and maintaining the organizational structure. Management makes sure that all staff members are aware of their obligations and how their work fits into the overall objectives of the company by clearly outlining roles and responsibilities. This clarity lowers the possibility of misunderstandings or work overlap while promoting accountability. In addition, management establishes channels of communication and a chain of command that facilitate efficient decision-making and problem-solving across the entire company.
Furthermore, management is in charge of creating a supportive work environment that encourages collaboration, creativity, and ongoing development. Employees are encouraged to grow professionally, take initiative, and contribute to the success of the organization by a capable management team. Increased productivity, less attrition, and greater employee happiness are all results of this favorable work environment.

Conclusion: In conclusion, the results of this paper highlights the importance of management for all facets of a corporate organization, from specific duties and projects to the general operations and long-term goals of the enterprise. A company that lacks competent management will find it difficult to succeed since it won't have the leadership, organization, and guidance necessary to run smoothly and meet its goals. Regardless of size or sector, successful companies understand the value of management and make the necessary investments to assemble competent, strong teams that can steer the firm toward long-term expansion and success.

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Impact of food and health in 21st century era : a global economic crises

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Abstract

Globaleconomic crises have a significant influence onhow foodand healthare related inthe twenty-first century, as they increase food poverty and health inequities. Increased rates of malnutrition and diet-related disorders result from rising food prices and supply chain disruptions,whicharefrequentlybroughtonbyeconomicdownturns.Nutritiousfoodbecomes less readily available.

Economic instability restricts the access of vulnerable groups, especially those living in low-income areas, to food and healthcare, making them more susceptible to hardship. Chronic health problems, mental health challenges, and overburdened healthcare systems are all exacerbated by this condition.Furthermore, reduced investment in sustainable agriculture practices also makes people less resilient to shocks in the future, and climate change makes matters worse. The promotion of a more resilient food system and a healthy populace in the face of persistent economic uncertainties necessitates the implementation of effective policy interventions and international collaboration.

Food, health, and global crises are deeply interconnected issues that have far-reaching implications. An increasing number of food crises are caused by a number of overlapping, yearly factorsthat fuel hunger. Gaining a grasp of the magnitude ofthe challenge requires an examinationoftheinteractionsamongconflict,economicshocks,andtheeffectsoftheclimate crisis.Theinterrelatedchallengesofpandemics,non-communicableillnesses,andmalnutrition increase economic inequality and worsen poverty, especially in developing countries.

Keywords: Global economy, health crises, developing nations, environmental impact, pandemics, economic instability…

1. Introduction

Food, health, and global economic crises have brought significant opportunities as well as challenges in the 21st century. In low-income areas especially, food insecurity has increased duetorisingfoodpricesthataremadeworsebysupplychaindisruptions,conflict,andclimatechange.[1]Non-communicablediseaseshaveincreasedduetopoornutritionandlackofaccess to healthcare, placing additional burden on public health systems and economies. The importance of innovative food systems and sustainable agriculture has increased as countries strugglewiththeseproblems.Inadditiontoenhancinghumanwell-being,investmentsinhealth infrastructure and fair access to nutrient-dense food also support economic resilience. In the end,developingamoresecureandprosperousinternationalsocietydependsonresolvingthese interrelated concerns. [2]

Food systems and healthcare have seen significant changes in the twenty-first century; these two sectors are closely related to the world economy. The way food is produced, distributed, and eaten has changed due to rapid technological breakthroughs, shifting demography, and changingenvironmentalcircumstances.[3]Newpandemics,non-communicablediseases,and growing healthcare expenses are all putting strain on health systems at the same time. The complex relationship that exists between food, health, and the economy has contributed to a globalproblemthat isaffectingbothdevelopedanddeveloping nations. Itexploresthe impact of food and health in the 21st century, specifically in relation to the ongoing global economic crises. [4]

Food Insecurity and Its Economic Consequences

Acrisishasemergedfromfoodinsecurity,whichhaslongexistedinmanyregionsoftheworld. A significant portion of the world's population still struggles to get access to affordable, wholesome food, despite advancements in agricultural technology. [5] The COVID-19 epidemic made the estimated 690 million undernourished people in 2020 much worse, according to the Food and Agriculture Organization. The production of food worldwide is furtherthreatenedbyclimatechange,landdegradation,andthelossofnaturalresources,which raises price volatility. [6]

Food insecurity has become a major problem due to rising food prices brought on by events related to climate change and interruptions in the supply chain. Almost 800 million people worldwidesufferfromhunger,andmillionsmoreareatriskbecauseofrisingprices,according to the UN. Because a large amount of household income is spent on food in developing countries, this condition not only jeopardizes human well-being but also destabilizes economies. Food insecurity and economic instability are amplified in a feedback loop that results from the social unrest and economic relocation that follow. These events can impede growth and deepen cycles of poverty. [7]

The effects of food insecurity on the economy are enormous. In low-income countries in particular, poor nutrition is directly associated with reduced productivity, higher healthcare expenses,andimpededeconomicprogress.[8]Malnutrition,particularlyinchildhood,impairs cognitivefunction,whichinturnresultsinworseacademicperformanceandasmallerearning potential as an adult. Countries with high rates of food insecurity are frequently caught in a downward spiral of underdevelopment and poverty, which exacerbates the gap in global income. [9]

HealthCrisesandRisingHealthcareCosts

The effects of food insecurity on health are severe. Obesity or undernutrition, both types of malnutritionhaveasignificantimpactonpublichealthsystems.Numerousnon-communicable diseases,includingdiabetesandcardiovasculardisorders,areexacerbatedbypoordietandput morestrainonhealthcaresystems.[10]Thefinancialimpactisenormous,asbillionsofdollars arespenteveryyearonthetreatmentofdisorderslinked tonutrition.Economicproductivityis also decliningashealthcaresystemsstruggleto meettherisingdemand, whichputseconomic resilience at even greater risk.

Thecomplexityoftheproblemsfacingglobalhealthisrisingconcurrentlywithfoodinsecurity. Unhealthy diets and sedentary lifestyles have contributed to a dramatic increase in non-communicable diseases, including obesity, diabetes, and heart disease. In the meantime, infectious diseases—both ancient and modern—remain a serious threat to public health. The COVID-19 pandemic demonstratedhow rapidlyhealthemergencies mayoverwhelm medical institutions, upend economies, and result in a large number of fatalities. [11]

Afurtherworryistherisingcostofhealthcare.Healthcarecoststake upalargeamountofthe national budget in many nations, taking funds away from other important sectors like infrastructureandeducation.Particularlybecause NCDsfrequentlynecessitate long-termcare and treatment, they have a significant financial impact. It can be extremely expensive to treat bothcommunicableandnon-communicablediseasesindevelopingcountries,wherehealthcare systems are already precarious. [10]

PandemicsandGlobalEconomicDisruption

TheCOVID-19pandemicof2019highlightedhowsusceptibletheworldeconomyistohealth crises.Theeconomicconsequenceswereimmediateandsevereasgovernmentsthroughoutthe globeimplementedlockdownsandtravelrestrictionstostopthevirus'sspread.[12]Worldwide supply networks experienced disturbances, sectors including travel and hospitality incurred significant losses, and jobless rates skyrocketed. The overcrowding of healthcare systems in many nations resulted in a high death toll and unstable economies. [13]

The pandemic also highlightedto the link between nutrition and health. Food insecurity was made worse by disruptions in food production and delivery, which resulted in a lack of food and a rise in price. In addition, groups with pre-existing medical conditions—which are frequently associated with an unhealthy diet and way of life—were more susceptible to the virus's severe effects. The pandemic is expected to have cost the economy trillions ofdollars, anditsrepercussionsareprobablynotgoingtogoawayforyears.Tolessentheeffectsoffuture pandemics, recommendations have been made for stronger healthcare systems and more readiness. [14]

ClimateChange:ALoomingThreat

Climate change has a significant impact on public health as well as food production. Global food supplysystemsareunder riskdueto extreme weather events, shiftingagriculturalzones, and resource depletion that put traditional farming practices to the test. [15] Innovative food technologiesandsustainablefarmingmethodspresentviableanswerstotheseurgentproblems. Investing in resilient, efficient, and equitable sustainable food systems will help countries reduce the effects ofclimate change and improve food security, which willultimately lead to healthier people and more stable economies. [16, 17]

It'sbecomingclearthatfoodsystemsandhealthoutcomesaresignificantlyimpactedbyclimate change.[18]Foodproductionisalreadybeingimpactedbyrisingtemperatures,harshweather, and shifting agricultural zones, which is resulting in reduced yields and increased pricing for staple crops. Less developed areas that mostly depend on agriculture for a living are disproportionatelyimpacted.Furthermore,aswarmertemperaturesfostermorehospitable circumstancesforvirusesandtheir vectors,suchmosquitoes,thespreadofinfectiousdiseases is facilitated by climate change. [18, 19]

Climate change has enormous economic effects; projections indicate that if current patterns continue, it might cut the world GDP by as much as 18% by 2050. Climate change not only directly affects food production and health, but it also makes inequality worse because the poorest countries are typically the ones least able to adapt to its impacts. Reducing the long-term economic harm brought on by climate change requires both climate-resilient health systems and sustainable agriculture practices. [20, 21]

GlobalizationandUnequalAccesstoFoodandHealthcare

Globalization has increased economic development and technical advancements in many regions of the world, but it has also made disparities in access to healthcare and food more severe. [22] The increased availability of processed and unhealthy meals due to global food supply chains has led to an increase in diet-related ailments. Millions of individuals in developing nations stillface barriers to receiving eventhe most basic medicaltreatment. [23]

These inequalities have severe economic consequences. Poverty and underdevelopment are perpetuated in many developing nations by a lack of access to nourishing food and proper healthcare. [23, 24] Further undermining economic progress is the increased risk of political instability and social unrest brought on by the widening global health inequities. It will take coordinated global effort to address these disparities, including funding for public health systems and the development of just and sustainable food systems. [24]

The food, health, and economic problems are linked issues that call for international collaboration and extensive policy changes. Food security must be given top priority by governments and organizations as a crucial element of economic strategy, taking health outcomes into account when making financial plans. [25] Community resilience can be strengthened through programs including expanding social safetynets, funding regional food systems, and encouraging public health education. International collaborative initiatives, like the Sustainable Development Goals, offer frameworks for nations to cooperate in achieving common goals. [25, 26]

2. Conclusion

In conclusion, the impact of food on health in the 21st century are deeply linked to world economic crises. In addition to straining economies around the world, rising healthcare expensesandthefrequencyofnon-communicablediseasescontributetofoodinsecurity,which isexacerbatedbyclimatechange, inequality,anddisruptionsinsupplynetworks.Theneedfor robust healthcare and sustainable food systems was further underscored by the COVID-19 pandemic, which brought attention to how susceptible global systems are to health catastrophes. In order to ensure long-term economic stability and the well-being of all, addressing these concerns would require concerted global efforts, with an emphasis on guaranteeing fair access to food, healthcare, and climate change mitigation. In the areas of food, health, andglobalcrises, the21stcenturyhas brought withit bothnewopportunitiesand difficulties.Significant hazardsto theglobaleconomyandpopulationwell-beingareposedby food shortages,growing healthcare expenditures, and the impending threatofclimate change. However, these interconnected challenges can be addressed with coordinated efforts and creativesolutions. Encouraging fair accessto healthcare, constructingsustainableagricultural systems, and addressing climate change head-on are crucial first steps toward developing a stronger,moreresilientglobalcommunity. Itwillbeessentialtoprioritizerobustpublichealth effortsandsustainablefoodsystemsinordertodevelopeconomicresilienceandpromotewell- being in the face ofan increasinglyunpredictable future. Policymakers and stakeholders may work toward a more secure, just, and sustainable future for everybody by acknowledging the interconnectedness of these concerns.

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Technostress and Work Performance: A Review Study

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Abstract: It is the era of digital technology**.** The growth of technology has shaped organizational practices and work culture. It has become inevitable to work and grow without technology. The rapid transformation and advancement in technology have changed the pattern of work-life. The rapid sharing of information and communication has sped up the work processes. Technology has become ubiquitous, and it has been seen to enhance productivity. The use of digital technology has grown in every organization across the globe to get more advantages from it. Digitalization and technological use have a significant impact on work and workers. It has both negative and positive effects. In positive impact, it has been seen to enhance productivity, but in damaging effect, it has also led to technostress, stress induced due to the use of technology. The term technostress has become increasingly more relevant in modern workplaces. Technostress has a multifaceted impact on work performance. Technostress arises from factors such as rapid technological transformation, constant connectivity, and pressure to adopt and work with new technology. These stressors create anxiety, frustrations and burnout among employees and thereby influence their work performance. The primary purpose of this article is to explain the technostress and how it impacts the work performance of employees working in different domains.This article examines the impact of technostress on work performance through analysis of past studies. This article integrates the literature through past studies and identifies the gaps to give future direction.

Keywords: Technostress, Digitalization, TechnostressorsWork Performance and Technostress Mitigation

1. Introduction: Stress is an interaction between a person and his external environment through physical and emotional reactions. Individuals have their personal experiences about stress, and they experience it at different levels **(Gerekan et al., 2024).** ICT's rapid growth and development have benefitted human beings **(Batmaz et al.,2022),** but they have also created troublesome consequences in the form of technostress**(Hung et al., 2015).** Technological advancements have dramatically changed the workplace. They have transformed business operations by offering modern technology and streamlining processes that enhance productivity and efficiency. The diffusion of digitalization and ICT in organizations has transformed the communication process, business strategies and models, and their relations with other industries **(Çini et al., 2023),** and it has been introduced for the betterment of human life **(Salnova et al., 2013).** Technostress develops when people deal directly with IT objects and includes the pervasive use of IT in society **(Reidl, 2013).**Technostress has positive and negative consequences, but negative consequences have been found more in the literature **(Ayyagari et al., 2011; Raghu Nathan et al., 2008; Reidl, 2013)**. Due to its pervasive nature, it affects all employees and it has become a growing field of research in academics **(Chen, 2015).**Due to more negative consequences,most researchers called it the dark side of technology.

2. Literature Review:Craig Brod (1984) was the first to define technostress as a condition in which a person cannot deal and cope with computer technology healthily.The manifestation of technostress is attributed to different factors and variables, so-called techno stressors. **Raghunathan et al.** (2008) classified the factors that cause technostress into five categories. Techno overload happens when an employee is expected to work longer and faster due to multiple technological work demands as he is constantly connected with technology. Techno-invasion refers to situations in which technology intrudes into personal life, and people fail to separate work and leisure time. Constant connection with technology creates blurred boundary lines between work and home situations; users experience a loss of privacy **(Chandra et al., 2019).** Techno complexity refers to that stressful situation in which an employee feels that he is technology-deficient and cannot adapt to that technology. Techno insecurity happens when employees have a fear of replacement by a more technology-skilled employee. Techno uncertainty refers to the anxiety felt by an employee that rapid technological changes add uncertainty about future outcomes, and they need to learn and update their skills **(Alam, 2016; Kim & Lee, 2021).La Torre et al. (2020)**, in their review study, identified three types of technostress, namely techno anxiety, techno-fatigue and techno addiction. Techno anxiety is a situation where people are not at ease with the use of ICT, and they have psychological arousal with increased blood pressure. Techno-fatigue is a situation where people have cognitive exhaustion along with tiredness. Techno addiction is a situation in which people have the compulsion to use technology in every aspect of their lives, along with their family care roles.

3. Methodology: In this study, the researchers investigated the latest research findings from scientific literature available in different scholarly databases and synthesized the results. They used an integrative research design to carry out this research.

4.Impact on Work Performance

Papers/ Study	Impact
(Boonjing&Chanvarasuth, 2017)	Overuse of Mobile and Work-Related Issues such as Job Satisfaction, Job Effectiveness and Job Efficiency are positively associated with technostress. Less cordial relationships with colleagues, less concentration on work and making mistakes while working
(Tams et al.,2018)	In their experimental study, they developed a 2×2×2 mixed model design. They found that technology-mediated interruptions significantly impact older people more than younger people and lower their performance.
(Borle et al., 2021)	They studied the different types of techno-stressors and their association with work outcomes. The techno-stressors increased burnout and work exhaustion. They have adverse effect on work performance.
(Cahapay&Bangoc II, 2021)	They found a negative relationship between technostress and work performance.
(Li & Wang, (2021)	Technostress creators' techno-complexity and techno-insecurity have a negative influence, while techno-overload is positively associated with teacher work performance.
(Hurbean et al., 2022)	They checked the impact of technostress induced by instant messaging (IM) on work performance. The study revealed mixed results. They found that techno-overload and techno-invasion positively impactwork performance, while techno-complexity negatively influences them.
(Çini et al., 2023)	The impact of digital transformation (DT) on technostress and performance was checked. The study revealed the positive impact of DT on technostress and employee performance, while technostress reduced employee performance.
(Fernandez-Fernandez et al. ,2023)	They studied the use of ICT during teleworking, which leads to stress and anxiety among the users. A higher level of technostress reduced the performance and satisfaction of teleworkers.
(Saleem& Malik, 2023)	Technostress impact on performance was measured using quality of work-life as a mediator and organizational flexibility as a moderator.

	Three dimensions of technostress, techno-complexity, techno-invasion and techno-overload, are not affecting the performance levels of university teachers.
(Syakina et al., 2023)	They used the Person-Organization Fit Theory to find the impact of technostress on work performance. Lack of colleague support and an imbalance between the ability to demand and supply resources reduced performance.
(Gerekan et al. 2024)	They examined the mediating role of professional commitment in relation to technostress and individual work performance. A high level of technostress leads to a higher level of professional commitment, which in turn leads to greater individual work performance.

5. Discussion: Studies of the impact of technostress on work performance have found that technostress has negative consequences. Conversely, workers have no cordial relationships with colleagues and feel exhausted, creating anxiety and burnout problems. As a result, they failed to concentrate on their work and committed mistakes. Among the techno stressors, techno-complexity and techno-invasion are negatively associated with work performance, while techno-overlaid has been found to enhance work performance. A high level of technostress reduced work performance.

6. Conclusion, Future Research Direction and Limitations

This study provides valuable insights into the relationship between technostress and work performance. However, it needs to be further investigated. Longitudinal and cross-sectional studies can be conducted to develop a more logical and rational understanding and examine technostress's long-term impacts. As technology continues to grow and evolve, future research should focus on emerging technostressors and their effects on work performance.The study reveals that technostress poses a challenge in the modern workplace, which is more digitalized and ICT-enabled and has heavy implications for work performance. Understandingtechnostress dimensions and their impact on employees' work performance is essential to developing mitigation interventions. A holistic approach that includes organizational and individual-level interventions helps manage technostress and enhance work performance. There is a need to explore this emerging issue further to provide insights and solutions. There are certain limitations to this study. Our study adds value to the literature by combining the results of different studies. However, it has dealt with few studies, and more studies should be aggregated to make it more comprehensive. Further, it is limited to the study of the impact of technostress on work performance,and it lacks the review and discussion of possible mitigation strategies available in the literature.

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E-COMMERCE: INTERNATIONAL BUSINESS: IN SUPPLY CHAIN MANAGEMENT:

E-COMMERCE: INTERNATIONAL BUSINESS: IN SUPPLY CHAIN MANAGEMENT (ECSCM)

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TITLE: Ecommerce in International business is a various process of logistic, supply chain activities, which is a procedural systems that have been adopted in procurement, sourcing, of raw materials, to be manufactured into finished products, warehoused, stored, with adoption of inventory control systems, fulfillment of last mile delivery, on Business to Consumer, for internal, global, processing, selling, on-line across geo-political also to other countries, with the needs of local requirement, so as to reach the consumer, customer in supply chain.

ABSTRACT OF THE STUDY/REVIEW:
E-Commerce in International business combined with Supply chain is practiced in manufacturing industries using internet to carry out value added activities, so that products produced by the manufacturers, and customers and results in good return on investment.
E-Commerce in International Business practiced planned, executed in Supply chain management is that the manufacturers, logistic organizations, distributor's, suppliers, retailers, and customers or consumers are eligible to participate in supply chain..
E-Commerce in International Business in Supply chain management has the concept of coordination between various processes in supply chain, and is very essential in reducing cost in supply chain..
E-Commerce in International in Supply chain by proper planning, execution, can reduce its procurement cost by suppliers significantly by providing suppliers access to information regarding inventory, as the suppliers becomes access to procurement, it can reduce the cost, and focus on the value of the materials, in order to get more involved in vendor selection, sourcing, and managing good relation with suppliers in supply chain.
E-Commerce on International market, in Supply chain is planned with ground reality, executed with implementation that can be brought about: 1. Improve information system between suppliers and customers. 2. Constitute a team of members from the organization, also from different organizations, to carry out better implementation between the suppliers. 3. Identify leaders in the organization who are capable to lead a time to bring in efficiency in E-Supply chain 4. Divide the product identification according to segments: Tier I Tier II Tier III in supply chain.
E-Commerce following the concept of International market, in Supply chain ensure organization to get timely, and accurate forecast with regard to service conditions, which allows for better production, planning, based on requirement, also the cycle time of production in supply chain.
Key Words: E-commerce: International market: Planning: Execution: Reducing Cost: Procurement: Manufacturers: Logistics:

INTRODUCTION:
The advantages of E-Commerce in the International market of Supply chain: 1. Reduce inventory: 2. Improves efficiency: 3. Cost reduction: 4. Increase the ability to implement just-

in-time on delivery,also enhance better customer service. 5. Increase revenue thus providing increased, also better customer service.

E-Commerce in collaboration with International trade in Supply chain management is a collaborative use of technology to improve the operations of supply chain activities, as well as management of supply chain. The main factor contributed to the transaction from Supply chain Management to E-Commerce Supply chain management is to: 1. Need for reduction in cost, improvement through modern management in the organization from supplier to customer. 2. Introduction to computerization, of the internal function of the organization with better management methods: 3. the need for efficiency, also the agility, lean management, of the organization in order that they can respond to the higher demands of the customer. 4. The efforts to optimize the organization by having lower inventory both in manufacturing, also in distribution.

E-Commerce in Supply chain with International trade also include: 1. Supply chain replenishment with integration of production distribution process, also in which organization can use this process to reduce inventory, eliminate stock points, also increase the velocity of replenishment by synchronizing supply and demand. 2. E-procurement can use Web based technology to support procurement of key process including requisitions, sourcing contract ordering, also on payment, since it supports both direct, and indirect material, thusemploying Web-based function such as on-line catalogues, controls purchase orders: 3. Inventory management using wireless devices which can achieve improvements in inventory management, by using bar-coding, with wireless devices including Radio Frequency Identification. 4. Collaborative planning requires buyers, also sellers to develop share demand forecast of multiple supplies along with supply chain to improve planning and fulfillment of customer demand.

In supply chain E-Commerce, in International trade, does increase the capacity of the warehouse, customer proximity, so that the consumers are liable to fulfill orders in supply chain. In supply chain E-Commerce, combined with International trade, through automation, in process, is also liable to increase the capacity, offer better shipping deals for orders, better price, discounts, in supply chain.

Supply chain in E-Commerce combined with International trade, introduced, is able to demonstrate the kitting of items, in one lot for easy assembly of the products, as an when they are delivered to customers for easy reference of assembly, without spending much time on the product assembly in supply chain.

FIGURE 1 STRUCTURE OF E-COMMERCE ON PLANNING/EXECUTION:

PURPOSE OF THE STUDY:

With the advent of internet, also with wireless electronic communication,Ecommerce combined with International trade,-Supply chain management, has enabled organization to be more responsive to the customers, with theadvancement in technological,that areliable to change the market place,continuously providing, an impetus for a change in strategic alliance in supply chain.

Traditional supply chain management along with E-commerce combined with International trade, supply chain management,also hasthe resulting impact on strategicalliance, which considers the inherent ability to be dynamically adaptable in supply chain.

E-Commerce in Supply chain management coinciding with International trade comprises of process, having the main phases of standardization, interdependency, identification of business process mapping, also flow analysis in supply chain.

E-Commerce in Supply chain, having combined with International trade, is a concept introduced to the need of adaptability, also the flexibility in a highly dynamic e-business, environment which focus on network integration, in electronic linkage, having technological enabled relationship in supply chain.

The rapid development of information technology, and global competition E-commerce combined with International trade, has no bound limits in supply chain, since the supply chain is undergoing global pressure, and competition, which is being deeply thought, also in the concept of re-designing in supply chain.

Supply chain E-Commerce with the development of International trade, has also concurred with one time invoice, easier for payment, documentation, process orders faster, as this becomes liable for better, also with simple procedures in supply chain.

As global supply chain undergoing International business, in conjunction with E-commerce vast network process involved within organization, are sourcing globally, which includes procurement of materials, transportation, managing foreign inventory domestically, as these supply chains become extremely complicated, with demand in consumer, customer requirement, with consumer, customer requiring the product atthe possible time, also at the most convenient place, having Omni-channel supply distribution, becomes an convenient to put forward the warehouse operation, to the best capability in supply chain.

LITERATURE REVIEW

E-Commerce in International trade combined with supply chain environment, E-Network , business network, should satisfy customers demands through network connected supply chain to serve end consumer, customer responses from supply chain, strategy in the market value in supply chain, can jointly create profitable revenue through integrated solution for the responses in 75% of the supply chain..

E-Commerce in Supply chain is a combination planned, executed, between the Internet of Things, used in International trade that the supply chain managementconcepts, which is developed as a result of the evolution of the information technology, as well as re-engineering of the organization business process, towards partners co-operation enabled by the internetin a about 60% of the concepts in supply chain..

E-Commerce in Supply chain have the impact on internet,with the integrity of the original business in International trade process, from the end-user to the many of the suppliers of the products services, which also provides information to the customers, also to other partners in the organization,which is likely to createa value of about 50% in supply chain.

E-Commerce in Supply chain management is to help International business is planned, executed to integrate resources in the supply chain; strengthen products, also the cash management, with the reduction in the operation cost. E-Commerce combined with Supply chain management, agreeing with International Trade, as an organizational business will be able to gather real-time, information concerning customer orders, inventory receivables, payable, sales, and performances in different locations in supply chain. E-Commerce in Supply chain management benefits of International trade, is liable to shortened sales periods, lower sales costs, bring better co-operation with suppliers with an improved efficiency of 80% in supply chain,

RESEARCH METHODOLOGY:

Primary: Real-time management with E-Commerce in International trade business, supply chain management has the impact to supply chain which has planning, execution, and control over supply chain.

Negotiation management in E-Commerce in International trade business in supplychain management enables buyers to negotiate with suppliers in the price term of certain immediate profits. Negotiation procedures are set up according to the power of the user in supply chain.

Research: Manufacturing planning in E-Commerce in International trade business in supply chain management is a comprehensive planning, also a having a simulation system, that combines flexible forecasting techniques time based demand supply planning, with planned based execution environment, that help supply chain, to respond quickly to changes in customer demand also the operational requirement in supply chain.

Secondary: E-Commerce concurred with International trade business, in Supply chain management in which E-Procurement process supports the procurement, also the sourcing activities through internet technologies, which enables efficientnegotiations, between buyers also the suppliers, thus to reduce cost, sharing information, since procurement involves retrieving sharing,having storing large quantities of data, also information in supply chain..

E-Commerce combined with International trade business, in whichsupply chain management is a network of suppliers, manufacturers, warehouses, distributors, retailers, who co-ordinate plans and activities develop products by converting raw materials into finished goods or products.

RESULTS:

Implementation: E-Commerce constituted with in Supply chain also with International business activities, involves various approaches used to integrate suppliers, manufacturers also the distributors in performing functions, material procurement, material transformation, in intermediate, also the finished product, the distribution of these products to the distribution centre's, and then to the point of sale in supply chain.

Supply chain in International business, with E-Commerce in Supply chain management is a concept that can be described as a network of independent organization that are not only distributors or certain products, and services in supply chain, but also stimulate the demand and lead the synchronization of capabilities, and resources in whole supply chain in order that they provide levels of operational efficiency and leadership in the market.

E-Commerce in International business with supply chain management can also propose customer relationship, customer service, manufacturing demand management, e-fulfillment, procurement, manufacturing, floor management, product development, and commercialization, and reverse logistics, which become a part of related to the process of integration of internet, with business process in supply chain.

Tactical in supply chain management is an operation management technique,in International business, which seeks to integrate, also optimize the capabilities of internal business functions, also to direct them to new opportunities for cost reduction, whichthrough increased channel by working with matching function from E-Commerce also with International business standards in supply chain management.

Supply chain with tactical supply chain management, also International business, can be divided into activities like supplier management, inventory optimization, product service, processing, customer management, customer order, channel supply support facilitate financial transaction market information flows, electronic transformation flows, integrated logistic in E-Commerce in supply chain management.

Strategic E-Commerce with International business, in Supply chain management transfers sequential supply chain network, into focused supply chain based on strategic function through collaborationof the organization for correlated supply chain process in management.

DISCUSSIONS AND FINDINGS:

Teaching Note: Web technology in E-Commerce in International business in supply chain management enables the integration, also the synchronization of all supply chain information, with the process subdued in supply chain. Web based application allows the reduction of transactional cost, as E-Commerce with International business, in supply chain management cost with standards enable low cost in integration of customer supplier product information and competitions for supply chain, as the business process of documentation, also data management becoming a real-time process in supply chain.

Generating International business in E-Commerce in Supply chain management,have more value for customers through agile flexible collaboration, also the intelligence to be used in the system to build on a dynamic network of Web-enabled organization systems.

Analysis: Supply chain management uses the competences, also the bestresources to exploit them in more efficient manner into the extended virtual organization, also E-Commerce in

Supply chain management coinciding with International business, on planning, execution by extending multiple application support in organization to win a competitive advantage, because they create more value for customers, also have the goal to satisfy the client requirement in the best possible way in real-time supply chain management.
E-Commerce in International business in supply chain management plans, executes that allows application to create an extra value for the customer, which has the goal to satisfy the client requirement in the best possible way, also createa real time value in supply chain.

FUTURE WORK/CONCLUSIONS/RECOMMENDATIONS:

Future work: International business in E-Commerce in Supply chain management, does allow the creation of additional or extra value for the customer, also have a goal set to the client requirement in the best possible way, also in the requirement of real time in supply chain, with switching over to a Web based application in E-Commerce streamlining International business, in Supply chain, also required for streamlining supply chain activities, manufacturing consistent quality of service, which is controlling distribution of the data, which otherwise cannot be achieved without a providence in supply chain.
E-Commerce constituted with International business in Logistic as an application of internet based technology to traditional logistic process or Web based application alsoservices in E-Commerce in Supply chain management, with International business, dealing with the efficiency of transportation, distribution, and storage of products along the demand in supply chain management.
Recommendations: E-Commerce combined with International business, in the Supply chain management system, planned, executed, can improve supply chain management by allowing effective communication, between the organizations in supply chain, as well as providing access to information. In general the problem of reducing information overloading which is considered to be another advantage of E-Commerce in Supply chain, which is analyzed as the role of information sharing, also collaborating the behavior, which may be indicated as a positive impact of commitment, reciprocity, through performance in supply chain.
Conclusions: E-Commerce in Supply chain management with International Business is a concept of combination between internets, the supply chain management, also the true balance between the internet also supply chain.E-Commerce in supply chain management is a new dimension concept, and developed as an evolution of the information technology, as well recognizing the organization, business process, towards the organization cooperation enabled by internet.

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Nexus of Telecom, Media & Entertainment and E-commerce Industry: A Systematic Literature Review

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Nexus of Telecom, Media & Entertainment and E-commerce Industry: A Systematic Literature Review

Abstract

Due to rapid technological advancement, the integration of telecommunications, media, and e-commerce has become commonplace and thereby has fetched significant attention from industry experts and scholars. The incessant developments in telecommunications, particularly the growth of digital platforms like Over-the-top (OTT) and the internet, have fundamentally transformed the way media content is produced, distributed, and consumed. This study synthesized findings from research papers published from the year 2014 to 2024 aimed at exploring the convergence between these intertwined sectors. The analysis of existing studies highlights the significant impact of digital transformation on the telecommunications, M&E, and e-commerce industries along with key themes, driving factors, and gaps in the literature, thereby providing a comprehensive understanding of how telecom, media, and e-commerce industries influence each other. The study seeks to inform stakeholders about the evolving dynamics of this relationship and assist them in framing strategies to leverage synergies between telecommunications services and media content distribution. The findings direct future researchers to explore the strategic implications of this convergence, addressing the complex interplay between technological, regulatory, and competitive factors that shape the industry landscape. This review underscores the need for a multidisciplinary approach to understanding the intricate relationships and dynamics between the telecom, media, and e-commerce sectors, as these sectors continue to converge and evolve in the digital age.

Keywords: Telecom, media & entertainment, e-commerce, convergence, systematic literature review

1.Introduction

In the past decade, there has been a significant increase in internet and smartphone penetration in India. Internet penetration in India has also quadrupled in the last decade, growing from a countrywide penetration of 12.6 percent in 2012 to 48.7 percent in 2022.According to a report by Statista, India ranks second among the countries with the most internet users worldwide, with 692 million people using the internet regularly as of January 2023(Petrosyan, 2023).As per the quarterly report of the Indian telecom services performance indicator released on 9 February 2024, the total number of internet subscribers in India stands at 918.19 million as of September 30th, 2023 (TRAI, 2024).The launch of Reliance Jio in 2016 has been a key factor in India's internet growth. Immediately after its launch, Internet data rates fell dramatically, and telecom companies developed their fiber optic networks to remain competitive. Reliance Jio reduced the prices for internet connection from Rs 250 / GB to around Rs 10 / GB, which resulted in the majority of Indians making the transition from 2G to 4G connectivity.Reliance JioInfocomm Ltd, doing business as JIO, is a subsidiary of Reliance Industries Limited which is an Indian telecommunication service provider and mobile network operator(Anand, 2023).The next 5G technology is going to bring about a significant shift in the telecommunications, media & entertainment (M&E), and online retail industries, bringing about a new era of connectivity, content creation anddistribution, and customer experiences.Due to India’s continuous rising digital empowerment, the convergence and consolidation of industries has emerged as a pivotal phenomenon, remolding traditional industry set-ups and creating new competitive landscapes. Among the most prominent industries experiencing this convergence and consolidation are the telecom, media & entertainment (M&E),and e-commerce industries.Traditional telecom companies like Reliance Jio are venturing into content creation and distribution, media houses are leveraging digital platforms for content delivery, and e-commerce giants are diversifying into entertainment streaming services. Such consolidation among these industries emphasizes the need to gain an in-depth knowledge of the synergies and opportunities that come with the convergence.Telecom operators are increasingly expanding their service portfolios to include media and entertainment content. They are partnering with content providers or acquiring media companies to offer bundled services such as video streaming, music streaming, and gaming subscriptions alongside traditional telecom services like voice, messaging, and data. Along with this, Telecom companies are venturing into the e-commerce space by leveraging their extensive customer base and distribution networks and offering services like mobile payments, digital wallets and online marketplaces, enabling customers to shop for products and services directly through their telecom provider's platform.While convergence and consolidationare not a new phenomenon, digitization has greatly impacted and expedited them. The smartphone is a vivid example of the convergence of digital sectors and the rapid pace of digitalization is pushing similar transitions across all other sorts of business entities. Five consumer trends have emerged because of convergence which are user-generated content, social networking, democratization of content, personalized schedules and diversified consumer groups.

2. Systematic review of literature

This study utilized a conceptual research approach, focusing on a literature review to analyze existing studies on the nexus of telecom, M&E, and e-commerce industries. The literature search was conducted using the keywords "Telecom and Media", “Telecom and E-commerce”, “(Media and Entertainment) and E-commerce”, and “Convergence of Telecom” which are pertinent to the topic under investigation. Several scientific databases, including Science Direct, Scopus, and Google Scholar, were used to locate relevant studies, with the search limited to publications from 2014 to 2024. The search yielded numerous publications in this field, published in various journals such as the Journal of Engineering, Technology, and Applied Science, Purakala, Vision, FIIB Business Review, International Journal of Information Technology, Communications and Convergence, Convergence: The International Journal of Research into New Media Technologies, Media, Culture & Society, Journal of the Knowledge Economy, etc.

2.1 Alzub (2023) observed the impact of digital media disruption on the traditional media formats such as broadcast, print and advertising along with its impact on changed consumer behaviour, content generation and distribution. This study was qualitative in nature as it conducted systematic literature review of existing related work and in-depth interview of experts was conducted to extract the relevant data. The grounded theory analysis of the data reported that digital disruption and democratization of content generation and consumption has both transformative and disruptive impact on conventional media platforms.

Source: Authors’ work

2.2 Mishra (2023) in his study "Emerging ICTs increasingly need policy convergence: an account of ICT policy convergence in India" aimed to disclose the increasing ICT convergence which was facilitated by technological growth happening in India. This study based on the qualitative case study and conceptual framework emphasized the need for ICT policy convergence and the role of the telecom regulatory authority of India in regulating the telecom and broadcasting sector where ICT remains neglected**.** It further suggested that the ICT policy convergence was the urgent need to address the various problems, challenges, and proposed solutions for it.

2.3 Saba and David (2023) carried out a study in 205 countries to investigate the factors that influenced the convergence of telecommunication infrastructures during the period 2000-2018. The study used principal component analysis (PCA) to measure telecommunication infrastructure and System GMM to investigate the factors. The findings suggested that economic, human, demographic, and financial deepening are the key variables that are instrumental in the convergence of telecommunication infrastructure across the countries.

2.4 Sharma and Lulandala (2022) carried out a study to gain in-depth understanding of consumer behavior towards adoption of OTT platforms and also to investigate the new strategies that subscription-based OTT platforms implemented to maintain their resilience during the covid-19 outbreak. The study used Eisenhardt's multiple case studies approach to find the strategies adopted by the top-performing subscription-based OTT operators in India. This study identified seven resilient strategies for Over-The-Top (OTT) services, leading to a shift in consumer behavior from occasional to regular usage which is driven by convenience, accessibility, COVID-19 risk, content variety and quality, online reviews, and affordability.

2.5 Gupta and Singharia (2021) aimed to study the impact of technological advancement in telecommunication services on the changes in the media consumption habits of consumers in India. A google questionnaire was constructed on five-point Likert scale and was posted on social media groups to gather primary data from 182 respondents. The study further used PLS-SEM in Smart PLS 2.0 for analyzing the data. The results of the study established that consumer engagement and quality of service experience played a significant role in influencing customers' willingness to consume media on OTT platforms such as Amazon Prime, Netflix and Disney Hotstar.

2.6 Sood and Sharma (2021) explained the relationship between digital engagement by customers and customer lifetime value by analyzing the mobile recharges of 13 milllion prepaid telecom subscribers from January 2019 to June 2019 in the Indian telecom industry. The data analyzed through Kruskal-wallis test showed that digital adoption by customers has significantly increased customer loyalty and thereby customer lifetime value. It also revealed that the customers that actively engage with digital platforms are more loyal than digitally engaged customers contributing to higher CLV.

2.7 Mathai and Jeswani (2021) examined the effect of print media on customer retention for the Indian telecommunication industry by studying effect of mediating components of brand equity which includes brand loyalty, perceived quality, brand awareness, brand association. Data were collected through an online administered google questionnaire from 200 telecom service users through a convenience sampling technique and and analysis was performed using (PLS)- based structure equation modelling. The findings of the study demonstrated that print media did not affect telecom service providers' customer retention rates since it had a little effect on consumers' intentions to continue using the service.

2.8 Sadana and Sharma (2021) analyzed the shift in young consumers choice from traditional Pay TV services (Cable TV/DTH) to top Over-The-Top (OTT) platforms as their favorite source of entertainment in India. They also explored the significant factors that contribute to such preferences towards OTT platform along with gamification of content. Data were gathered through a structured online survey among consumers of various age groups which were analyzed using factor analysis. The findings of the study indicated five factors i.e. content and viewing behavior, cost of services, offers and rewards, convenience, and telecom that influences the consumers’ choice for entertainment consumption.

2.9 Chauhan and Shah (2020) conducted an empirical analysis to explore the changes in the media consumption habits of Indian consumers due to COVID-19 outbreak. Primary data were collected from 353 respondents through a questionnaire which was shared as a google form link by applying convenience sampling technique. IBM SPSS Statistics was employed to perform T-test and One-way ANOVA for analyzing the data which indicated that consumers spent significant hours of their day on websites and mobile applications for media consumption and OTT platforms like Youtube and Instagram for the purpose of entertainment.

2.10 Tang et al. (2020) presented a study using IPC co-occurrence-based analysis to examine the extent to which patterns of technology convergence change over time by focusing on 3D printing. This study explored the impact of technology convergence on industrial structures and organizational competitiveness. The results of the study showed that there is significant growth in specific combinations IPC and thereby indicated that technological convergence in 3D printing field is evolving with emerging trends for future development.

2.11 Suresh and Biswas (2019) structured a theoretical framework to find out the extent to which psychological variables (self-esteem, loneliness, depression and anxiety) influenced the internet addiction in millennials and to the extent this internet addiction contributed to online impulsive purchasing behavior among them. The data were garnered from 202 respondents from Bangalore city by using multi-stage sampling technique. The data were then analyzed by performing factor analysis and linear regression. The results revealed that internet addicted users suffer from loneliness and spend relatively their significant time on e-commerce websites indulging in compulsive online buying. It further suggested e-commerce vendors to form alliance with telecom service providers to understand their customers and better promote their products.

2.12 Mukherjee (2019) discussed how the launch of Jio caused disruption in the Indian telecom operations and its impact on mobile phone customers. Data were collected by conducting interviews with telecom consultants and mobile phone users, the study attempted to analyze this phenomenon at different levels of operations which are Jio's market strategies, Airtel's responses, user experiences, and the government's digital vision. The study claimed that the disruption caused by Jio led to the development of infrastructural systems by the other telecom players and made millions of Indians enter the digital world not with PCs or laptops but through their phones.

2.13 Vukanovic (2018) in his study analyzed and discussed how digital convergence and divergence have affected digital media business models. Based on the thorough review of the literature, the author stated that while the media distribution platforms are converging, content consumption is diverging due to increasing media production houses and their content delivery. In other words, the democratization of content due to Web 2.0 both from the perspective of content producers and content consumers is leading toward the digital convergence.

2.14 Mishra (2014) conductedresearch to understand Indian journalists' perception of media convergence and its accompanying challenges and future implications. By using a purposive sampling technique, 20 journalists were selected to conduct in-depth interviews. The interviews reported that although media convergence is not a matter of concern for Indian journalists but indicated that convergence is going to be a common practice in the near future.

2.15 Sawng et al. (2015) studied consumption patterns and perception of Japanese and Korean users towards converged IT services by conducting comparative analysis and using Hofstede's cultural dimensions theoryand it also aimed to identify the key drivers that influenced their intentions to reuse those services and thereby provided the different implications of innovative convergence services. In Japan, 1000 users and in South Korea 250 users were surveyed through personal one-on-one interviews through the random sampling technique. The analysis of data was performed using (PLS-SEM) statistical technique with PLS Version 2.0 M3. The study discovered system quality, richness in convergence functions, economic benefit, and innovativeness as factors that collectively influenced users' perceptions of usefulness and their intentions to continue using digital convergence services.

3. Research gaps

From the above literature survey, it has been found that numerous studies have been conducted to study the consumer perception and behavior towards telecommunication, OTT, print, and other media services, the perception towards converged services in telecom, media, and technology, impact of digital media on traditional media formats, impact of technological advancements in telecommunication services on media consumption habits but there has been no research is conducted to study the combined effect of the synergy or convergence and consolidation happening in telecom, media & entertainment and e-commerce services and its implication for business.

4. Key themes emerged from the synthesis

After conducting an in-depth analysis of the studies mentioned above, these studies were synthesized,through which a few themes emerged which are described as follows:

4.1 Digital media disruption and consumer behavior: Alzub (2023) and Gupta and Singharia (2021) both focused on the transformative impact of digital disruption on traditional media and consumer behaviors. Alzub (2023) highlightedhow digital media democratization has both disrupted and transformed conventional media platforms such as broadcast and print media, altering consumer behaviors and content distribution on the other hand, Gupta and Singharia (2021) further explored this disruption in the context of India, finding that technological advancements in telecommunications significantly influence consumer media consumption habits, particularly on OTT platforms like Amazon Prime and Netflix.

4.2 ICT and Telecommunications convergence: Mishra (2023), Saba and David (2023), and Tang et al. (2020) delved into the convergence of ICT and telecommunications. Mishra (2023) emphasized the urgent need for policy convergence in India’s ICT sector, highlighting the role of the Telecom Regulatory Authority of India in addressing regulatory gaps. Saba and David (2023) extended this exploration globally, identifying economic, human, demographic, and financial factors as key drivers of telecommunication infrastructure convergence across 205 countries. Furthermore, Tang et al. (2020) focused on the technological convergence in

3D printing, demonstrating how this convergence affects industrial structures and competitiveness.

4.3 OTT platforms and changing media consumption: Sharma and Lulandala (2022) and Sadana and Sharma (2021) specifically investigated the rise of OTT platforms and their impact on media consumption. Sharma and Lulandala (2022) identified seven resilient strategies employed by OTT platforms during the COVID-19 pandemic, which led to a significant shift in consumer behavior towards more regular and diversified media consumption. Sadana and Sharma (2021) analyzed the factors driving young consumers in India to prefer OTT platforms over traditional Pay TV, finding that content variety, cost, and convenience are critical factors.

4.4 Customer loyalty and digital engagement: Sood and Sharma (2021) and Mathai and Jeswani (2021) focused on customer loyalty and digital engagement in the telecom sector. Sood and Sharma (2021) revealed that digital engagement significantly enhances customer lifetime value in the Indian telecom industry, indicating that customers who actively engage with digital platforms exhibit higher loyalty. In contrast, Mathai and Jeswani (2021) showed that print media has a negligible impact on customer retention in the telecom sector, underscoring the declining influence of traditional media in the digital age.

4.5 Psychological and behavioral impacts of digital media: Suresh and Biswas (2019) and Mukherjee (2019) explored the psychological and behavioral impacts of digital media. Suresh and Biswas (2019) investigated how internet addiction among millennials lead to compulsive online buying, suggesting that e-commerce vendors collaborate with telecom providers to better understand and target these consumers. Mukherjee (2019) discussed the disruptive impact of Jio’s entry into the Indian telecom market, highlighting how it accelerated digital adoption among millions of Indian consumers, primarily through mobile devices.

4.6 Global perspectives on media and technology convergence: Vukanovic (2018), Mishra (2014), and Sawng et al. (2014) provided global perspectives on media and technology convergence. Vukanovic (2018) discusses the dual forces of convergence and divergence in digital media business models, driven by the democratization of content creation and consumption. Mishra (2014) examined the Indian journalists' perceptions of media convergence, predicting its widespread adoption in the near future. Sawng et al. (2014) compared Japanese and Korean consumers' perceptions of converged IT services, identifying cultural and functional factors that influence their continued use of these services.

5. Future research directions

Based on the extensive review of the literature, it is suggestedthat future researchers or scholars should divert their attention toward understanding the nuances of the topic under investigation. For example, to investigate the evolving impact of newer digital technologies on traditional media formats, toexamine the effects of policy convergence in ICT on telecommunications and broadcasting, especially in developing countries, and how it influences market dynamics and consumer access. Also, they can study long-term changes in consumer behavior in relation to OTT platforms, focusing on content preferences, consumption patterns, and the role of emerging technologies such as AI and VR. Furthermore, they can focus on analyzing how future technological advancements in telecommunications will further alter media consumption habits, particularly focusing on the integration of 5G and beyond. Most importantly, they can conduct comparative studies across different countries and cultures to understand the diverse impacts of media and technology convergence on consumer behavior and media industries.

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Work Stress Management among Women Entrepreneurs in India: A Conceptual Study

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Abstract:

Women are playing a very important role in the economic and social development of the nations all over the world. Today women of entrepreneurs in India represent a group of women who have broken away from the beaten track and exploring new vistas of economic participation. However studies on women entrepreneurship show that women have to cope with stereotyped attitudes towards women on a daily basis. Lack of social support, high responsibility pressures, role struggle and poor work –family balance are major challenges for women entrepreneurs in India. Research suggests that females globally rarely manage time to feel relax and are stressed and overworked most of the time. Working women have a whole set of problems involving both family and professional lives. Women have to play their role as a wife, a mother and an earner. They have to manage their career while maintaining traditional roles. That means for working women it is two sets of overlapping responsibilities. Therefore, in addition to their traditional roles, professional roles seem to be one of the major sources of stress that working women have to face. In the last few decades the researchers have devoted considerable time and attention in the area of women entrepreneurship. The present study intended to understand stress faced by women entrepreneurs, and its causes and methods used to cope up with stress.

Key words--- Stress, entrepreneurship, Work place stress, role struggle

Introduction:

Women entrepreneurship in India has gained momentum over the past two decades, driven by policy initiatives, increased access to education, and growing economic opportunities. Women-led enterprises span diverse sectors, from technology and finance to traditional crafts and rural industries. However, the entrepreneurial journey for women in

India is often fraught with stress stemming from multiple dimensions, including societal norms, family responsibilities, and professional challenges. Addressing work stress is critical not only for the well-being of women entrepreneurs but also for the sustainability and success of their ventures.

This study delves into the multifaceted nature of work stress experienced by women entrepreneurs in India, analyzing its causes, impacts, and management strategies. The conceptual framework developed herein offers a foundation for future empirical research and practical interventions.

Review of literature

Dr. A. Chandra, Balaji, and Kishore (2015) studied the relationship between self-esteem and stress, various factors that create stress among gold-collar professionals in Chennai city, and the impact of stress on employee health. According to their findings, the majority of female married employees experience a higher degree of stress than males and unmarried employees. The statistics show that there is no substantial link between self-esteem and stress.

Kristina and Stephen (2015) revealed that working women experience higher levels of stress than males. The stressors are multiple roles, discrimination and stereotyping.

Huvaneshwari (2013)revealed that stress among married working women is induced by a variety of family and official duties, workplace harassment, working long hours, and an incorrect work-life balance. Long-term headaches, hypertension, and obesity are all stressors for working women. She also stated that balancing work and family, receiving institutional support, spending time with family, and engaging in physical activity can all help to reduce stress.

M. buzhumathi and Rani (2012) revealed that stress has been connected to work-family conflict among female professionals. Conclusion Stress is a rising concern in the workplace, particularly among working women. Individuals may display physical, psychological, and behavioral difficulties as a result of excessive amounts of stress. The most harmful impacts of stress are linked to performance. Women employees report higher non-fatal, long-term, and debilitating health issues. According to the literature review, working women are typically involved in many tasks at the same time, juggling home and professional duties, which causes stress. Stress is an issue that is difficult to avoid. Stress is part of everyday life.

Kristina (2008)observed in their study that work-related stress in women and its association with self-perceived health and sick leave among working women. The findings reveal that the major factor causing stress among them is ‘stress owing to hard to set limits’, and followed by ‘increased workload’. On the other hand women associated with ‘high perceived stress owing to indistinct organization and conflicts’ are reported taking more sick leaves.

Women Entrepreneurship

According to the general concept, a women entrepreneur may be defined as a woman or a group of women, who initiate, organize and operate a business enterprise. The Govt. of India has defined a women entrepreneurship as “an enterprise owned and controlled by a woman having a minimum financial interest of 51% of the capital and giving at least 51% of the employment generated in the enterprise to women”. Kerala Govt. defined women industrial unit as units owned/organized by women and engaged in small-scale and cottage industries with not less than 80% of the total workers as women.

Problems of Women Entrepreneurs

Even though Indian society has evolved, and everyone claims that men and women are equal, gender barriers still exist heavily. Despite the government's efforts to encourage women's leadership and empowerment, it is still challenging for females to prove their skills and gain recognition for their endeavors.Women entrepreneurs encounter two sets of problems; general problems of entrepreneur and problems specific to women entrepreneurs. These are discussed as follows:

Women may not have property on their name to use them as security to get fund from external sources. The banks consider women less credit worthy and discourage women borrowers on the belief that they can at any time leave their business.

Scarcity of raw material and Stiff competition

Women may not get high quality material at minimum of cost. Women do not have money for canvassing and advertisement. Thus they have to face stiff competition with organized sector and with their male counterparts.

Limited mobility and Family Tie

Women's mobility in India is highly limited due to various reasons. In India, it is mainly a women's duty to look after the children and other members of the family. Her total involvement in family leaves little energy and time to devote for business.

Lack of Education

In India around 60% of women are illiterate. Due to the lack of education and too quantitative education, women are not aware of business, technology and market knowledge.

Male dominated society

In the male dominated society, women are not treated equal to men. This is in turn, serves as a barrier to women entry into business

Low risk bearing ability

Women in India lead a protected life. They are less educated and economically not self- dependent. All these reduce their ability to take risk involved in running an enterprise. Inadequate infrastructural facilities, shortage of power, high cost of production, social attitude, low need for achievement and socio-economic constraints also hold the women back from entering into business.

Women Entrepreneurship in India

Indian women are breaking stereotype and moving away from traditional roles and corporate profiles to turn entrepreneurs. It is not just the educated, urban women, but also women from smaller towns and rural villages who are turning to entrepreneurship and setting up independent business. Women entrepreneurs in general, are faced with the dichotomy of managing both the home and their business equally well. This may generally leave them with much less time for business development. In India, though, the challenge entrepreneurial women face is gaining visibility and acceptability. It has traditionally been a challenge for women to set up an enterprise. In initial days of establishment of a business, women usually face preliminary barriers by different individuals of this eco-system, be it banks, suppliers or vendors. According to the recent 'women and men in India 2012 report' by the central statistics office, there are 12% of ministerial positions held by women and 9% of the women are judges in different high courts in India. This indicates that women, though in small percentages, are participating in the decision process of India, thus proving that women can be competitive and efficient when it comes to delivering results. Helping to involve Indian women in the business environment is the internet; it is a great leveler. It is a very potent business tool that is far reaching and cost effective.

Key Stressors for Women Entrepreneurs

Traditional gender roles in India often place a disproportionate burden on women to fulfill family and household responsibilities. The dual role of managing a business and a household creates significant stress, especially in conservative communities where entrepreneurship is perceived as secondary to familial duties.

Work-Life Balance Challenges

Balancing professional aspirations with personal commitments is a pervasive challenge for women entrepreneurs. The lack of affordable childcare, limited support from family members, and rigid societal structures exacerbate the struggle to maintain work-life equilibrium.

Resource Constraints

Access to financial, human, and technological resources remains a persistent barrier for women entrepreneurs in India. Discriminatory lending practices, inadequate networks, and limited mentorship opportunities contribute to stress and hinder entrepreneurial growth.

Psychological Stressors

Feelings of isolation, self-doubt, and fear of failure are common psychological stressors among women entrepreneurs. These challenges are often amplified by societal scrutiny and the pressure to prove oneself in a male-dominated business environment.

Impact of Work Stress on Women Entrepreneurs

Work stress can have profound implications for the health, productivity, and business outcomes of women entrepreneurs. Chronic stress may lead to burnout, reduced decision-making capacity, and deteriorating mental and physical health. Furthermore, stress adversely impacts innovation, customer relationships, and long-term business sustainability.

Stress Management Strategies

Stress often arises from feeling overwhelmed by competing demands. Effective time management and prioritization can help you regain control of your schedule.Here are some valuable stress management strategies to consider incorporating into your daily routine.

Building Resilient Support Networks

Encouraging peer networking, mentorship programs, and collaboration among women entrepreneurs can provide emotional support, knowledge exchange, and practical guidance. Such networks create a sense of community and reduce feelings of isolation.

Time Management and Delegation

Training in time management techniques and effective delegation can alleviate the pressure of juggling multiple responsibilities. Leveraging technology to automate routine tasks also helps optimize time and resources.

Promoting Mental Health and Well-Being

Workshops and awareness programs on stress management, mindfulness, and mental health can equip women entrepreneurs with tools to cope with stress. Encouraging regular exercise, meditation, and self-care practices fosters overall well-being.

Policy Interventions

Government and institutional support through financial incentives, skill development programs, and access to childcare facilities can significantly reduce stressors for women entrepreneurs. Tailored policies that address the unique challenges faced by women in different regions and industries are essential.

Conclusion

Work stress among women entrepreneurs in India is a multi-dimensional issue influenced by socio-cultural, economic, and psychological factors. Effective stress management requires a holistic approach that combines personal strategies with systemic support. By fostering an enabling environment and empowering women entrepreneurs with the tools to manage stress, India can unlock the full potential of women-led enterprises, driving inclusive growth and innovation.

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Harnessing Artificial Intelligence for Women Empowerment : Opportunities and Challenges

Mrs. Rakesh bhardawaj

Abstract:

Womenempowermentstandsasacrucialaspectofsustainabledevelopment,yetpersistent challenges such as economic inequality, limited access to education and healthcare, and underrepresentationindecision-makingrolespersistglobally.Thispaperexploresthe intersection of Artificial Intelligence (AI) and women empowerment, presenting opportunitiesforaddressingthesechallengesandfosteringinclusivedevelopment.By integratingAItechnologieslikemachinelearning,naturallanguageprocessing,androbotics. Thispaperhighlightsnovelsolutionstoempowerwomenacrossvariousdomainssuchas education, healthcare, economic independence, and policy-making. Through a comprehensivereviewofexistingliterature,policyframeworks,andcasestudies,itprovide sinsights into the transformative potential of AI in promoting Women empowerment.

Keywords:Women,education,decision-making,technology,disparities,Initiative

Introduction:

Thetermwomenempowermentisallaboutauthority,orthepowerembarkedonwomen sharing indistinguishable rights. The term refers to the liberation of women from socio-economicrestraintsofreliance.Womencomprisearound50%ofthecountry’spopulation, and a bulk of them stays economically dependent on each other without employment. In the age of feminism, a small portion of women in India are freed and can employ their free willandarepermittedtocarveouttheirlivesthewaytheywant.Butthereisaconsiderable division of the women in this nation who require optimistic support. In most Indian villages and semi-urban cities, women are still denied fundamental education and are never authorized to continue higher education despite amassing the understanding required.

Women's empowerment is key to economic and social outcomes. Benefits from projects that empower women are higher than those that just mainstream gender.[10] More than halfofbilateralfinanceforagricultureandruraldevelopmentalreadymainstreamsgender, butonly6percenttreatsgenderasfundamental.Ifhalfofsmall-scaleproducersbenefited fromdevelopmentinterventionsthatfocusedonempoweringwomen,itwouldsignificantly raise the incomes of an additional 58 million people and increase the resilience of an additional235millionpeople.However,theintersectionofArtificialIntelligence(AI)and womenempowermentpresentsapromisingavenueforaddressingthesechallengesand fostering inclusive development. The integration of AI technologies, including machine learning, natural language processing, androbotics, offersnovel solutionstoempower womenacrossvariousdomains.Fromenhancingaccesstoeducationandhealthcareto fostering economic independence and promoting gender-inclusive policies, AI holds immensepotentialtocatalyzepositivechangeforwomenglobally.

This research paper aims to explore the dynamic relationship between AI and women's empowerment,examiningthecurrentlandscape,opportunities,challenges,andpotential pathways for leveraging AI to advance gender equality and women's rights. By critically analyzingexistingliterature,policyframeworks,andcasestudies,thispaperseekstoprovide insights into the transformative power of AI in promoting women's empowerment while addressingethicalconsiderationsandmitigatingrisks.

Inessence,thisresearchpaperseekstocontributetothegrowingdiscourseonAIand women's empowerment, providing a nuanced understanding of the opportunities, challenges,andethicalconsiderationsatthenexusoftechnologyandgenderequality.By elucidating actionable insights and policy recommendations, this paper aims to inform policymakers, researchers, and practitioners about the transformative potential of AI in advancingwomen'sempowermentandfosteringamoreequitableandinclusivesociety.

ReviewOfLiterature:

Areviewofexistingliteraturerevealsagrowingbodyofresearchexploringtherelationship between AI and women empowerment. Studies have highlighted the potential of AI technologies, such as machine learning, natural language processing, and robotics, in addressinggenderdisparitiesandpromotingwomen'sparticipationinvarioussectors. Additionally,scholarshaveexaminedtheethical,social,andeconomicimplicationsofAIfor women, including concerns related to bias, privacy, and job displacement which are as follows: Buolamwini and Gebru ,2018:

In this paper "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification" presents a pioneering study that investigates the accuracy of commercial genderclassificationsystemsacrossdifferentdemographicgroups.Theauthorsassessthe performance of these systems in classifying gender, particularly focusing on their performance across different skin tones and genders. Their findings reveal significant disparitiesinaccuracy,withdarker-skinnedindividualsandwomenbeingmisclassifiedat higherratescomparedtolighterskinnedindividualsandmen.Thisstudyunderscoresthe importance of addressing bias and fairness in AI systems, highlighting the potential InternationalJournalofResearchPublicationandReviews,Vol(5),Issue(6),June(2024), Page–1210-12151211consequencesofdeployingbiasedalgorithmsinreal-world applications.Overall,"GenderShades"servesasacriticalcontributiontothegrowing literature on algorithmic bias and fairness in AI, urging researchers and practitioners to prioritize fairness and inclusivity in the development and deployment of AI technologies. Reddy,V.,&Kumar,M.A.2018:Thispaperdiscussesthepotentialofartificialintelligence

(AI)asatoolforwomen'sempowermentinIndia.Theauthorsexaminevariousapplications of AI that can contribute to enhancing women's socio-economic status, including access to education,healthcare,andeconomicopportunities.Throughacomprehensiveanalysis,the paper highlights the role of AI in addressing gender disparities and promoting women's empowerment in the Indian context. Additionally, the authors discuss challenges and opportunities associated with the adoption of AI technologies for women's empowerment andsuggest strategiesfor leveragingAI effectively toachievegender equality goalsinIndia BuolamwiniandGebru2018.Thispaper"GenderShades:IntersectionalAccuracyDisparities in Commercial Gender Classification" presents a pioneering study that investigates the accuracyofcommercialgenderclassificationsystemsacrossdifferentdemographicgroups. Theauthorsassesstheperformanceofthesesystemsinclassifyinggender,particularly focusingontheirperformanceacrossdifferentskintonesandgenders.Theirfindingsreveal significant disparities in accuracy, with darker-skinned individuals and women being misclassifiedathigherratescomparedtolighterskinnedindividualsandmen.Thisstudy underscorestheimportanceofaddressingbiasandfairnessinAIsystems,highlightingthe potentialconsequencesofdeployingbiasedalgorithmsinreal-worldapplications.Overall, "Gender Shades" serves as a critical contribution to the growing literature on algorithmic bias and fairness in AI, urging researchers and practitioners to prioritize fairness and inclusivityinthedevelopmentanddeploymentofAItechnologiesVermaandRani'2019: This paper "Gender Inclusivity in AI: A Comprehensive Review," published in the InternationalJournalofAdvancedComputerScienceandApplications,offersanextensive examinationofgenderinclusivityinartificialintelligence.Theauthorsconductathorough review of existing literature, summarizing key findings and insights related to gender inclusivityinAIalgorithms,datasets,andapplications.Theyexplorevariousstrategiesand approaches aimed at promoting gender inclusivity in AI, such as inclusive data collection methods,biasdetectiontechniques,anddiversity-awarealgorithmicdesign.Additionally, thepaperdiscussestheimportanceofconsideringintersectionalityanddiverseperspectives in addressing gender biases and promoting inclusivity in AI technologies. By synthesizing findings from diverse studies, Verma and Rani provide valuable insights into the challenges and opportunities in fostering gender inclusivity in AI development and deployment. Their comprehensive review contributes to advancing our understanding of the complexities of genderdynamicsinAIandoffersactionablerecommendationsforpromotingfairnessand inclusivity in AI technologies. Overall, their work serves as a valuable resource for researchers,practitioners,andpolicymakersseekingtoaddressgenderbiasesandpromote diversityinAI.Mittal,S.,&Sharma,S.2019:Inthispaper,theauthorspresentacasestudy focusing on the use of artificial intelligence (AI) for women empowerment in rural India. Throughempiricalresearchandanalysis,theyexaminehowAItechnologiescanbedeployed to address socio-economic challenges faced by women in rural areas, such as limited access to education, healthcare, and economic opportunities. The case study explores specific AI-driveninitiativesandinterventionsimplementedinruralcommunitiestoempowerwomen andimprovetheirqualityoflife.The paperprovidesinsightsintothepotentialimpactofAI on women's empowerment in rural India and identifies opportunities for further research andintervention Varma, A., &Singh, A.2019: In thisstudy, the authorsinvestigate the role ofartificialintelligence(AI)inempoweringwomeninIndia.Throughempiricalresearchand analysis, they explore how AI technologies can be leveraged to address socio-economic challengesfacedbywomenandpromotetheirempowermentacrossvarioussectors.The paper discusses specific AI applications and interventions aimed at improving women's access to education, healthcare, economic opportunities, and political participation. Furthermore,thestudyexaminestheimpactofAIongenderequalityoutcomesinIndiaand identifiesopportunitiesforGurumurthyandJawahar2020,Thispaper"GenderShadesinAI: A Review" offers a comprehensive examination of gender biases in artificial intelligence systems. The authors critically review existing literature on gender biases in AI, covering various aspects such as data collection, algorithm development, and deployment of AI technologies.Theyhighlightthedifferentformsofbiasesthatcanemergein AIsystems, includinggenderstereotypesembeddedintrainingdata,biaseddecision-makingprocesses, andunequalaccesstoopportunitiesformenandwomen.Furthermore,thepaperdiscusses the implications of gender biases in AI for different domains, including employment, healthcare,andcriminaljustice.Bysynthesizingfindingsfromdiversestudies,Gurumurthy andJawaharprovidevaluableinsightsintothecomplexitiesofgenderbiasesinAIandoffer recommendations for addressing these biases to promote fairness and inclusivity in AI technologies.Overall,theirreviewcontributestoadvancingourunderstandingofthe challengesandopportunitiesinensuringgenderequityinAIdevelopmentanddeployment. Kuklinski and Brachten 2020, This paper "Gender Bias in AI—A Systematic Literature Review," published in Information Systems Frontiers, presents a systematic review of the existing literature on gender bias in artificial intelligence. The authors employ rigorous methodologytoidentify,evaluate,andsynthesizerelevantstudiesaddressinggenderbiasin AI algorithms, datasets, and applications. They examine various dimensions of gender bias, includingitssources,manifestations,andimpactsondifferentdemographicgroups. Additionally,thepaperdiscussesmethodologicalapproachesfordetectingandmitigating genderbiasinAI,suchasfairness-awaremachinelearningtechniquesandbiasmitigation strategies. By analyzing a wide range of studies, Kuklinski and Brachten provide comprehensiveinsightsintothecomplexitiesofgenderbiasinAIandoffer recommendationsforpromotingfairnessandinclusivityinAIdevelopmentanddeployment. Their systematic literature review contributes to advancing our understanding of the challengesandopportunitiesinaddressinggenderbiasinAItechnologies,servingasa valuableresourceforresearchers,practitioners,andpolicymakersworkinginthisarea.Kalra, S., & Arora'2020: This paper "A Literature Review on Gender Biases in AI" published in the International Journal of Engineering Research and Technology (IJERT) offers a systematic examination of gender biases in artificial intelligence. The authors conduct a comprehensive review of existing literature, summarizing key findings and insights related to gender biases in AI algorithms, data sets, and applications. They explore various factors contributing to genderbiasesinAI,includingdatacollectionmethods,algorithmicdesignchoices,and societal norms and stereotypes. Furthermore, the paper discusses the implications of gender biasesinAI for different sectors, suchashealthcare,education, andemployment.By synthesizing findings from a wide range of studies, Kalra, S., & Arora provide valuable insightsintothechallengesandopportunitiesinaddressinggenderbiasesinAItechnologies. Their literature review contributes to advancing our understanding of the complex interplay between gender, technology, and society, and International Journal of Research Publication andReviews,Vol(5),Issue(6),June(2024),Page–1210-12151212offersrecommendations forpromotingfairnessandinclusivityinAIdevelopmentanddeployment.Overall,theirwork serves as a valuable resource for researchers, practitioners, and policymakers working towardsgenderequityinAI.Vohra,N.,&Nanda,P.2020:Thispaperdelvesintothe explorationofthepotentialofartificialintelligence(AI)inwomenempowermentinIndia. Through an in-depth analysis, the authors examine various opportunities and challenges associated with leveraging AI to advance gender equality and empower women across differentsectors.ThestudyexploresspecificAIapplicationsandinitiativesaimedat addressingsocio-economicbarriersfacedbywomen,includingaccesstoeducation, healthcare,economicopportunities,andpoliticalparticipation.Additionally,thepaper discusses the implications of AI adoption for women's empowerment outcomes and proposes recommendations for maximizing the positive impact of AI on gender equality in IndiaKalyanpur,N.,&Garg,V.2020:Thispaperexplorestheopportunitiesandchallengesof using artificial intelligence (AI) for women empowerment in India. It examines how AI technologiescanbeleveragedtoaddressgenderdisparitiesandpromotewomen'ssocio-economicadvancementinvariousdomains.TheauthorsdiscusspotentialapplicationsofAI in areas such as education, healthcare, entrepreneurship, and governance, while also highlighting the ethical, social, and economic implications of AI adoption. Through a comprehensiveanalysis,thepaperprovidesinsightsintotheroleofAIinempowering women and advancing gender equality in India In conclusion, the existing literature underscoresthetransformativepotentialofAIinempoweringwomenandadvancinggender equality across diverse sectors. By leveraging AI technologies effectively, policymakers, civil society organizations, andtechnology developerscanaddresskeychallengesfacing women, promote inclusive socio-economic development, and contribute to the realization of the Sustainable Development Goals (SDGs). However, to maximize the benefits of AI for women'sempowerment,itisimperativetoaddressissuesrelatedtoalgorithmicbias,digital divide, and ethical considerations, while ensuring that AI policies and interventions are gender-responsiveandrights-based.

Objectives of the Study:

Theprimaryobjectivesofthisstudyare:

- Tostudythecurrentstatusofwomen'sempowermentinIndia
- ToexplorethepotentialofAIinenhancingwomen'ssocio-economicempowerment.
- ToexaminethechallengesandrisksassociatedwiththeuseofAIinadvancingwomen's empowerment
- ToprovidesuggestionsandrecommendationsforleveragingAIeffectivelytoempower women

CurrentStatusofWomenEmpowermentInIndia

WomenempowermentinIndiaisthemosteffectivetoolfordevelopmentasthesedays; womenacrosstheworldareactivelyworkingasaleaderandsurpassingothersinallthe spheresoflife.Astheentireworldisclaspingitsbreathandprayingeverysingledayforan incredible escape from the COVID-19 Pandemic, it is the women governors and nations steeredbytheseamazingfigureswhoaretakingovertheresponsibilityandmarchingahead inthebattlealonewhereverrequired.ThecurrentstatusofwomenempowermentinIndia reflects a complex landscape influenced by socio-cultural, economic, and political factors. Whiletherehavebeennotableadvancementsinrecentyears,significantchallengesand disparities persist, particularly in areas such as education, healthcare, economic participation, and political representation.

• Education:Educationisthemostvibrantfactorofadvancementandgrowth.Itistheonly significant tool for anticipating women empowerment in India & human resource development.Itgiveslighttothepossibilitiesforaccesstoemploymentandmakinga livelihood, which in twirl revivify economic empowerment to women. In order to join the communityofdevelopedcountries,peopleshouldunderstandthevalueandimportanceof women's education and, thereby, put combined efforts to make India on the progressive track.Educationmakestheindividualconscientious,enablingthemtocomprehend, interpret, criticize, and eventually transform their atmosphere. It results in the accession of abundancesofskillsthatheightenaperson'senthusiasmandherproficiencytoshapelifein a better form.

• Healthcare:Women'saccesstohealthcareservicesremainsasignificantconcerninIndia. Whileprogresshasbeenmadeinreducingmaternalmortalityratesandimprovingaccessto reproductive healthcare, challenges such as limited access to skilled healthcare providers, inadequateinfrastructure,andculturalbarrierspersist,particularlyinruralareas. Furthermore,gender-baseddiscriminationinhealthcaresettingsanddisparitiesinaccessto essential health services continue to undermine women's health outcomes and well-being.

• EconomicParticipation:Women'sparticipationinthelaborforceinIndiaremainslower than men's, with significant disparities in employment opportunities, wages, and occupational segregation. While there has been an increase in women's workforce participation in certain sectors such as information technology and services, women continuetobeunderrepresentedinleadershippositionsandfacechallengessuchasthe genderpaygap,lackofaccesstoformalemployment,andbarrierstoentrepreneurship. Additionally, women's participation in the informal sector, where labor rights are often undermined, poses challenges to their economic empowerment

• PoliticalRepresentation:Despiteconstitutionalguaranteesandlegislativereformsto promotewomen'spoliticalparticipation,womenremainunderrepresentedindecision-making rolesinIndia. While there have beeninitiativessuch asthe reservation ofseatsfor womeninlocalgovernancebodies(PanchayatiRajinstitutions),women'srepresentationin stateandnationallegislaturesremainslow.Deep-rootedpatriarchalnorms,lackofpolitical support, and electoral challenges hinder women's access to political leadership positions, limitingtheirabilitytoinfluencepolicy-makingandgovernanceprocesses

• Legal and Social Challenges:Women in India continue to face various legal and social challenges,includinggender-basedviolence,discrimination,andlackofaccesstojustice.

DespitelegislativereformssuchastheProtectionofWomenfromDomesticViolenceAct and the Criminal Law (Amendment) Act, implementation gaps, and cultural attitudes perpetuateimpunityforperpetratorsanddeterwomenfromseekingrecourse.Additionally, social norms and practices such as dowry, child marriage, and son preference contribute to the marginalization of women and girls, reinforcing gender inequalities. While there have beenstridesinpromotingwomen'sempowermentinIndia,significantchallengesand disparities persist across various sectors. Addressing structural barriers, investing in educationandhealthcareinfrastructure,promotingeconomicopportunities,andfostering an enabling environment for women's political participation are essential for advancing genderequalityandempoweringwomeninIndia.InternationalJournalofResearch PublicationandReviews,Vol(5),Issue(6),June(2024),Page–1210-12151213Additionally, addressing social norms, promoting gender-sensitive policies, and strengthening legal mechanismsarecriticalstepstowardscreatingamoreinclusiveandequitablesocietyfor women and girls. Government initiatives for women empowerment through AI in India :

GovtInitiativesInIndia:

Inrecentyears,theGovernmentofIndiahasrecognizedthepotentialofartificial intelligence (AI) in advancing women's empowerment and has initiated several programs andinitiativestoleverageAIforthesocio-economicdevelopmentofwomen.Someofthe notable government initiatives for women's empowerment through AI in India include:

• National Policyon Electronics(NPE):The National Policy onElectronicsaimstopromote the manufacturing of electronic products, including AI-enabled devices, which can benefit womenentrepreneursandprofessionalsbyprovidingaccesstoinnovativetechnologiesfor business growth and skill development

• DigitalIndiaInitiative:TheDigitalIndiaInitiativeincludesvariouscomponentssuchas digitalliteracyprograms,e-governanceservices,anddigitalinfrastructuredevelopment, which can empower women by enhancing their access to information, education, and economicopportunitiesthroughAI-poweredplatformsandservices.

• Skill India Mission:The Skill India Mission aims to provide skill development and training opportunitiestoyouth,includingwomen,inemergingtechnologiessuchasAIandmachine learning. Skill development programs focused on AI can equip women with the necessary technical skills to pursue careers in technology-related fields

• StartupIndiaInitiative:TheStartupIndiaInitiativeprovidessupportandincentivesto startups,includingthoseledbywomenentrepreneurs,workingoninnovativesolutions leveraging AI and other advanced technologies. This initiative encourages women to participateinthestartupecosystemandpromotesthedevelopmentofAI-drivensolutions for women-centric issues.

• Innovation Mission (AIM):AIM promotes innovation and entrepreneurship among students, including girls, through various initiatives such as Atal Tinkering Labs (ATLs) and AtalIncubationCenters(AICs).Theseplatformsprovideopportunitiesforgirlstolearnabout

AI,robotics,andotheremergingtechnologiesandtodevelopinnovativesolutionstoaddress societal challenges.

• NITIAayog'sWomenEntrepreneurshipPlatform(WEP):NITIAayog'sWEPaimstopromote and support women entrepreneurs through capacity-building programs, mentorship opportunities, and access to finance. The platform may explore AI-driven solutions to facilitatenetworking,marketaccess,andskillenhancementforwomenentrepreneurs

• AIforAllInitiative:TheMinistryofElectronicsandInformationTechnology(MeitY) launchedtheAIforAllInitiativetopromoteawarenessandadoptionofAItechnologies acrossvarioussectors.Whilenotspecificallyfocusedonwomen,thisinitiativecanindirectly benefit women by fostering the development of AI-driven solutions for women's empowermentandgenderinclusion.In1972-73womenworkinghostelareestablishedto promote the availability of safe and conveniently located accommodation for working women and provide accommodation to children of working women, up to the age of 18 years for girls and up to the age of 5 years for boys.

• Beti Bachao Beti Padhao (BBBP) Campaign:While not directly related to AI, the BBBP campaign aims to address gender-based discrimination and promote the education and welfareofgirls.IntegratingAItechnologiesintoexistinginitiativeslikeBBBPcanenhance monitoringandevaluationefforts,improveaccesstoeducationandhealthcareservices,and facilitate data-driven policy interventions to empower girls and women.

Theseinitiativescollectivelydemonstratethegovernment'scommitmenttoleveragingAIfor women's empowerment in India. By promoting digital literacy, skill development, entrepreneurship, and innovation among women, these programs aim to harness the transformativepotentialofAItocreatemoreinclusiveandequitableopportunitiesfor women across the country.

OpportunitiesAndChallenges

The use of artificial intelligence (AI) in advancing women's empowerment presents both opportunitiesandchallenges.WhileAIhasthepotentialtoaddressgenderdisparitiesand promote inclusivity, its deployment also raises various challenges and risks that must be carefullyconsidered.SomeofthekeychallengesandrisksassociatedwiththeuseofAIin advancing women empowerment include

• AlgorithmicBias:AIalgorithmsareoftentrainedonbiasedorincompletedata,whichcan perpetuate existing gender stereotypes and inequalities. Biased algorithms may lead to discriminatory outcomes in areas such as hiring, lending, and criminal justice, thereby exacerbating gender disparities rather than mitigating them

• Data Privacy and Security:AI systems rely on vast amounts of data, including personal information,whichraisesconcernsaboutdataprivacyandsecurity,particularlyforwomen. Inadequate data protection measures may expose women to risks such as identity theft, onlineharassment,andsurveillance,underminingtheirautonomyandsafety

• Digital Divide:Women, especially those from marginalized communities, often face barrierstoaccessingandbenefitingfromAItechnologiesduetofactorssuchaslimited digital literacy, internet connectivity, and access to technology. The digital gender gap exacerbatesexistinginequalities,excludingwomenfromtheopportunitiesaffordedbyAI- driven innovation.

• JobDisplacement:TheautomationofjobsthroughAItechnologiesmaydisproportionately affect women, particularly those employed in low-skilled and routine tasks. Job displacementcanexacerbateeconomicinequalitiesandexacerbategenderdisparitiesinthe labor market unless measures are taken to reskill and retrain women for emerging job opportunities

• PrivacyandDataProtectionConcerns:AIsystemsoftenrelyonlargeamountsofpersonal datatomakepredictionsandrecommendations.However,theuseofsensitivedata,suchas health records or financial information, raises concerns about privacy and data protection, particularly for women who may be at greater risk of data breaches and misuse. Ensuring robustdatagovernanceframeworksandimplementingprivacy-preservingAItechniquesare critical for safeguarding women's privacy rights. International Journal of Research PublicationandReviews,Vol(5),Issue(6),June(2024),Page–1210-12151214.

• Ethical andHuman RightsImplications:The deploymentofAI inwomenempowerment initiativesraisescomplexethicalandhumanrightsconsiderations.AIsystemsmayinfringe upon women's rights to autonomy, non-discrimination, and freedom of expression if not designed and implemented with ethical principles in mind. Moreover, the use of AI in sensitivedomainssuchashealthcareandcriminaljusticeposesriskstowomen'srightsto privacy, dignity, and due process.

• JobDisplacementandEconomicDisruptions:TheautomationoftasksthroughAI technologieshasthepotentialtodisrupttraditionalemploymentpatternsandexacerbate gender disparities in the labor market. Women, who are overrepresented in sectors vulnerabletoautomation,suchasretailandadministrativesupport,mayfacejob displacementandeconomicinsecurity.Additionally,thegigeconomyandplatform-based work models enabled by AI may exacerbate precarious working conditions for women.

• DependenceandDisempowerment:OverrelianceonAItechnologieswithoutadequate human oversight and critical thinking skills can lead to technological dependence and disempowerment,particularlyamongmarginalizedgroups.Womenwholackagencyand control over AI systems may become further marginalized and excluded from decision-makingprocesses,exacerbatingpowerimbalancesanddisempoweringwomeninsociety.

Addressing these challenges and risks requires a multi-stakeholder approach involving governments,civilsocietyorganizations,technologycompanies,andacademia.Promoting diversity and inclusion in AI development, ensuring transparency and accountability in AI systems,protectingwomen'sprivacyrights,andmitigatingthesocio-economicimpactsofAI deploymentisessentialforharnessingthetransformativepotentialofAItoadvancewomen empowerment in a responsible and ethical manner. Leveraging artificial intelligence (AI) effectivelytoempowerwomenrequiresaholisticapproachthataddressesvarioussocio- economic, technological, and ethical considerations.

SuggestionsForMaximizingthePositiveImpactofAIOnWomen Empowerment

HerearesomesuggestionsandrecommendationsformaximizingthepositiveimpactofAI on women empowerment

• PromoteGenderDiversityinAIDevelopment:Encouragegreaterrepresentationofwomen inAIresearch,development,andleadershiproles.Investininitiativesthatsupportgirls'and women's participation in STEM education and careers, including scholarships, mentorship programs,andnetworkingopportunities.

• EnsureEthicalandFairAI:PrioritizethedevelopmentanddeploymentofAIsystemsthat are transparent, accountable, and free from bias.Implementmechanismsfor auditing and evaluating AI algorithms to detect and mitigate biases that may harm women. Incorporate diverse perspectives and stakeholder input in the design and testing of AI technologies .

• FosterDigitalInclusionandAccess:Bridgethedigitalgenderdividebyprovidingwomen withequalaccesstodigitalinfrastructure,internetconnectivity,andtechnologyresources. Developtailoreddigitalliteracyprogramsandskillstraininginitiativestoempowerwomen withtheknowledgeandcapabilitiestoleverageAIfortheirsocio-economicadvancement.

• SupportWomen-LedAIInitiatives:Investinstartups,socialenterprises,andinitiativesled by women entrepreneurs that develop AIdriven solutions to address women's needs and challenges.Providefunding,mentorship,andincubationsupporttowomen-ledAIventures to scale their impact and foster innovation in women empowerment.

• PromoteAIforEducationandSkillDevelopment:IntegrateAItechnologiesinto educationalcurriculaandvocationaltrainingprogramstoenhancewomen'slearning outcomesandskilldevelopment.DevelopAI-powerededucationaltools,platforms,and resourcesthatcatertothediverselearningneedsandpreferencesofwomen,including those from marginalized communities.

• FacilitateAccesstoAI-enabledhealthcare:ExpandaccesstoAI-drivenhealthcareservices andtelemedicineplatformsthatcatertowomen'sspecifichealthneeds,includingmaternal and reproductive healthcare. Ensure that AI-enabled diagnostic tools and health interventionsareaffordable,culturallysensitive,andaccessibletowomeninruraland underserved areas.

• PromoteEthicalAIEntrepreneurship:EncourageresponsibleAIentrepreneurshipby fosteringacultureofethicalinnovation,socialresponsibility,andsustainablebusiness practices.SupportinitiativesthatpromoteethicalAIentrepreneurshipamongwomen, includingincubators,accelerators,andcompetitionsfocusedonsocialimpactandwomen empowerment.

• RaiseAwarenessandAdvocacy:Increasepublicawarenessandadvocacyeffortsaround thepotentialofAItoempowerwomenandadvancegenderequality.Educatepolicymakers, businesses,andcivilsocietyorganizationsabouttheimportanceofintegratingagenderlens into AI development and deployment strategies.

• MonitorandEvaluateImpact:Establishmechanismsformonitoringandevaluatingthe impactofAIinterventionsonwomen'sempowermentoutcomes.Collectsex-disaggregated data and conduct gender-sensitive evaluations to assess the effectiveness, equity, and inclusivityofAIinitiativesinempoweringwomenandclosinggendergaps.Byimplementing these suggestions and recommendations, policymakers, stakeholders, and technology practitionerscanharnessthetransformativepotentialofAItoempowerwomen,foster gender equality, and create a more inclusive and equitable society for all.

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Mutual Funds and Their Role in the Indian Economy: A Comprehensive Study

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Abstract
This research paper explores the growing significance of mutual funds in the Indian economy. It delves into their evolution, performance, regulatory framework, and role in channeling savings into productive investment avenues. Through an analysis of mutual fund schemes, investor behavior, and their impact on financial markets, the paper offers insights into how mutual funds contribute to economic growth. It also evaluates the challenges and opportunities for mutual funds in India, with a focus on the changing regulatory environment and evolving investor preferences.

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1. Introduction
1.1 Background
Mutual funds have evolved into one of the most important financial instruments in India, playing a critical role in the country's investment landscape. They allow individuals, both small and large investors, to pool their financial resources and invest in diversified portfolios managed by professional fund managers. This democratization of investment has made mutual funds a popular and accessible option for a wide range of investors, from individuals with modest savings to institutional players looking for sophisticated investment vehicles.
Mutual funds offer numerous advantages, such as diversification, liquidity, and professional management, which help mitigate the risks associated with direct investments in the stock market or other securities. These features have contributed to their increasing popularity, particularly in an era where financial markets have become more complex and volatile.
The growth of mutual funds in India can be traced back to the broader liberalization of the Indian economy in the early 1990s. Prior to this period, the financial markets in India were relatively underdeveloped, with limited options for retail investors. Investments were mostly restricted to traditional instruments such as bank fixed deposits, gold, and real estate, which offered limited returns and lacked liquidity. However, with the liberalization policies initiated by the Indian government in 1991, the financial landscape began to change dramatically. These reforms were aimed at opening up the Indian economy to global markets, enhancing competition, and fostering the growth of capital markets. This shift created the ideal environment for the mutual fund industry to flourish.
The first mutual fund in India was set up in 1963, with the establishment of the Unit Trust of India (UTI). UTI enjoyed a monopoly in the mutual fund industry for several decades, offering basic investment products to Indian citizens. However, the introduction of economic reforms in the 1990s paved the way for the entry of private sector players into the mutual fund industry. In 1993, the Securities and Exchange Board of India (SEBI) introduced the SEBI (Mutual Fund) Regulations, which established a regulatory framework for mutual funds in India. This framework was designed to ensure transparency, protect investor interests, and foster the growth of the mutual fund industry in a structured and sustainable manner.
As a result of these regulatory changes, several private sector mutual funds were launched, offering a diverse range of investment products to cater to different investor needs. This marked a significant shift in the Indian financial markets, as mutual funds provided an avenue for retail investors to participate in the capital markets with a relatively low-risk profile. Unlike direct investments in stocks or bonds, mutual funds offered the benefits of diversification, professional management, and lower transaction costs, making them an attractive option for risk-averse investors. Over time, mutual funds expanded their reach,

offering products across equity, debt, and hybrid asset classes, as well as sector-specific and thematic funds.
The 2000s saw rapid growth in the mutual fund industry, driven by increasing financial literacy, rising disposable incomes, and the growing awareness of the importance of saving and investing. The industry's growth was further accelerated by the advent of digital platforms, which made it easier for individuals to invest in mutual funds through systematic investment plans (SIPs). This period also witnessed the introduction of direct plans, which allowed investors to invest in mutual funds without intermediaries, thus reducing costs and increasing returns.
Today, mutual funds are an integral part of India's financial system, with assets under management (AUM) surpassing ₹40 trillion as of 2023. The industry has grown to encompass a wide range of products, including equity funds, debt funds, hybrid funds, and exchange-traded funds (ETFs), catering to a broad spectrum of investors with varying risk appetites and financial goals. Mutual funds have also played a key role in deepening the Indian capital markets, providing liquidity, enhancing price discovery, and supporting corporate financing through both equity and debt instruments.
In conclusion, the mutual fund industry in India has come a long way from its early days under UTI's monopoly to becoming a vibrant and competitive sector, offering a wide range of investment options to millions of investors. With the continued support of regulatory bodies like SEBI and increasing investor awareness, mutual funds are poised to remain a key player in India's economic growth, helping individuals and institutions alike to achieve their financial goals while contributing to the overall development of the Indian economy.

1.2 Objective

This paper aims to examine the role of mutual funds in promoting economic growth in India by analyzing their contributions to the financial markets, the regulatory environment that governs them, and their significance in driving domestic savings into investments.

1.3 Research Questions

- How do mutual funds impact the Indian financial markets?
- What is the regulatory framework for mutual funds in India, and how has it evolved?
- How do mutual funds encourage household savings and their allocation to the capital markets?

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2. Evolution of Mutual Funds in India

2.1 Early Years: UTI and Public Sector Funds

The concept of mutual funds in India was introduced in 1963 with the establishment of the Unit Trust of India (UTI). Initially, UTI enjoyed a monopoly and was primarily focused on generating savings from small investors. Over the years, other public sector institutions like Life Insurance Corporation (LIC) and General Insurance Corporation (GIC) launched mutual fund schemes.

2.2 Liberalization and Entry of Private Players

The liberalization of the Indian economy in 1991 led to the entry of private and foreign entities in the mutual fund sector. This period saw a significant expansion in mutual fund offerings, including equity, debt, and balanced funds. The establishment of the Securities and Exchange Board of India (SEBI) as the regulator for mutual funds in 1992 marked a shift toward better governance, transparency, and investor protection.

2.3 Growth Post-2000

Post-2000, India saw a rapid increase in the assets under management (AUM) of mutual funds, driven by economic growth, rising incomes, and increased participation from retail investors. The introduction of systematic investment plans (SIPs) further democratized investing, making mutual funds accessible to a wider segment of the population.

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3. Structure and Types of Mutual Funds in India

3.1 Equity Funds

Equity mutual funds invest predominantly in stocks and aim for long-term capital appreciation. They are categorized into large-cap, mid-cap, small-cap, and multi-cap funds based on the market capitalization of the stocks in their portfolio.

3.2 Debt Funds

Debt funds primarily invest in fixed-income securities such as bonds, government securities, and money market instruments. They are considered lower risk than equity funds and are ideal for conservative investors looking for steady income.

3.3 Hybrid Funds

Hybrid or balanced funds invest in a mix of equity and debt instruments, providing a balance between growth and income. These funds cater to investors with moderate risk appetite.

3.4 Sectoral and Thematic Funds

Sectoral funds focus on specific industries such as IT, pharmaceuticals, or banking, while thematic funds follow broader investment themes like infrastructure or rural development.

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 Types of Mutual Funds
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       ----------------------------------------------------------------
       |                  |                  |                  |
   Equity Funds        Debt Funds         Hybrid Funds      Sectoral/Thematic Funds
       |                  |                      |                  |
       |                  |                      |                  |
  Large-cap        Government Bonds            (Mix of Equity          Sectoral Funds
  Mid-cap         Corporate Bonds              and Debt)             (IT, Pharma, Banking)
  Small-cap        Money Market Instruments                               |
  Multi-cap                                                  Thematic Funds
                                                        (Infrastructure, ESG)
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4. Mutual Funds and Their Impact on the Indian Economy

4.1 Mobilization of Savings

Mutual funds play a crucial role in mobilizing savings from households and channeling them into the stock market and corporate debt, thus providing critical long-term capital for businesses. As of 2023, the mutual fund industry in India had an AUM of over ₹40 trillion, underscoring its significance in the financial ecosystem.

4.2 Financial Market Development

The growth of mutual funds has deepened the capital markets in India, leading to greater liquidity and price discovery. With increased retail participation, mutual funds have helped broaden the investor base in equity markets, which has contributed to market stability and resilience.

4.3 Role in Corporate Financing

Mutual funds, particularly debt funds, have become an important source of financing for corporates, providing them with access to cheaper capital compared to traditional bank loans. This is crucial for expanding businesses and fostering economic growth.

4.4 Influence on Monetary Policy Transmission

Mutual funds, especially debt funds, can affect the transmission of monetary policy. When interest rates change, the yields of the securities held by these funds fluctuate, influencing investor returns and savings behavior.

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5. Regulatory Framework for Mutual Funds in India

5.1 SEBI's Role

The Securities and Exchange Board of India (SEBI) regulates mutual funds under the SEBI (Mutual Fund) Regulations, 1996. These regulations ensure transparency, protect investor interests, and maintain the overall stability of the financial system.

5.2 Recent Regulatory Changes

In recent years, SEBI has implemented several reforms to increase transparency, including changes in the total expense ratio (TER), categorization, and risk management. The introduction of direct plans, where investors can invest directly without intermediaries, has also reduced costs for investors.

5.3 Taxation Policy

The taxation of mutual funds in India is governed by various provisions of the Income Tax Act. While equity funds benefit from favorable long-term capital gains tax, debt funds are subject to a higher rate of tax. This has influenced investor preferences for equity-oriented funds.

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6. Challenges and Opportunities for Mutual Funds in India

6.1 Challenges

Despite their growth, mutual funds face several challenges in India. The penetration of mutual funds in rural areas remains low, and investor education is still lacking. Moreover, the volatility of capital markets poses a risk, especially for small investors who may not fully understand market dynamics.

6.2 Opportunities

The rapid digitalization of financial services presents a significant opportunity for mutual funds. The rise of fintech platforms has made it easier for individuals to invest in mutual funds, particularly through SIPs. Additionally, increasing income levels and a growing middle class offer long-term growth potential for the industry.

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7. Conclusion

Mutual funds have emerged as a cornerstone of India's financial ecosystem, significantly contributing to the mobilization of household savings and efficiently channeling them into productive investments across various sectors. Over the past few decades, mutual funds have played a critical role in deepening India's capital markets, providing liquidity, and supporting corporate financing through both equity and debt instruments. By offering a diverse range of investment options that cater to different risk appetites, mutual funds have enabled retail investors to participate in the growth of the economy, further democratizing wealth creation. The robust growth of the mutual fund industry in India has been supported by a conducive regulatory framework, with the Securities and Exchange Board of India (SEBI) playing an active role in ensuring transparency, protecting investor interests, and maintaining market stability. Reforms such as the introduction of direct investment plans, lower total expense

ratios, and clear categorization of funds have made mutual funds more accessible and cost-effective for a wide range of investors.
However, despite the industry's impressive growth, significant challenges remain. Market volatility continues to pose a risk, particularly for small and retail investors who may lack the knowledge to navigate complex market conditions. Moreover, the penetration of mutual funds in rural and semi-urban areas remains relatively low, with a large portion of the population still reliant on traditional savings methods. To achieve its full potential, the mutual fund industry must address these challenges by expanding its reach through greater investor education and leveraging digital platforms to provide easy access to mutual fund products.
Looking ahead, the mutual fund industry is well-positioned for sustained growth, buoyed by the increasing financial literacy of the Indian population, the rise of digital financial services, and the growing middle class. As it continues to evolve, mutual funds will likely remain a vital component of India's financial market, helping shape the country's economic future by providing a reliable mechanism for investment and capital formation. With the right mix of innovation, regulation, and outreach, the industry will continue to play an integral role in India's long-term economic development
Mutual funds have increasingly become a driving force in shaping the financial landscape of India, facilitating the efficient allocation of capital while offering investors an accessible and diversified means of participating in market growth. By pooling resources from millions of investors, mutual funds have helped democratize access to equity and debt markets, ensuring that individuals across income levels can benefit from the potential of India's booming economy. The industry's ability to channel household savings into critical sectors like infrastructure, technology, and manufacturing has significantly contributed to the development of the broader economy, fostering job creation, innovation, and long-term growth.
Moreover, mutual funds have played a crucial role in enhancing market liquidity and improving price discovery, leading to greater efficiency in India's capital markets. The rising participation of retail investors, facilitated by mutual funds, has helped to broaden the investor base and reduce market volatility, making the financial system more resilient. Debt funds, in particular, have become a reliable source of financing for corporates, allowing businesses to access capital at competitive rates, which in turn drives investment and economic expansion.
Despite these successes, the mutual fund industry still faces hurdles that could affect its future growth. The volatility of capital markets can be daunting for new and inexperienced investors, potentially leading to short-term investment decisions that may not yield optimal returns. The need for continuous investor education, especially in the context of complex financial products and fluctuating markets, remains a pressing issue. Additionally, the geographical concentration of mutual fund investors in urban centers highlights the necessity of extending mutual fund services to India's rural and semi-urban populations, where financial literacy is often lower and access to formal investment vehicles is limited.
However, with the proliferation of digital technology and fintech platforms, mutual funds have a significant opportunity to reach untapped markets. The rise of systematic investment plans (SIPs), which allow investors to contribute small amounts regularly, has already begun to make mutual funds more accessible to lower-income households. By harnessing the power of digital platforms and mobile technology, the mutual fund industry can continue to expand its footprint, bringing the benefits of diversified investment to a wider audience.
In the long run, mutual funds will remain instrumental in shaping India's financial future, not only by promoting investment but by fostering a culture of disciplined saving and long-term financial planning. As the industry adapts to changing market conditions and evolving investor needs, mutual funds are set to become an even more integral part of India's financial

system. By addressing the challenges of market volatility, improving investor awareness, and expanding their reach, mutual funds can continue to drive economic growth, strengthen financial inclusion, and play a key role in transforming the Indian economy for years to come.

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Financial Markets and the Challenges of Sustainable Growth

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Abstract:

Sustainable growth and economic and environmental responsibility are not commonly connected with the phrase "financial market". Financial markets are associated with ruthless profit maximization at tolerable risk, rather than socially responsible behavior. However, in today's global market, businesses are shifting their objectives and becoming more conscious of the need of not only financial growth but also qualitative performance. International financial markets have joined the trend, progressively adopting environmentally friendly attitudes and embracing the difficulties provided by the notion of sustainable growth. Ideas like CSR (Corporate Social Responsibility) and SRI (Socially Responsible Investment) are gaining relevance.While sustainable economic growth as seen by the industrial or service sectors is often addressed, sustainable financial market growth is a relatively new notion, with little literature available on "green" financial markets. This study aims to address this vacuum by examining the changes that have occurred on financial markets in the context of the concept of sustainable growth, with a focus on the Indian markets.Furthermore, the abstract discusses the importance of international cooperation and policy alignment in fostering a financial ecosystem conducive to sustainable growth. The implications for policymakers, financial institutions, and investors are considered, emphasizing the necessity for a collaborative approach to overcome the barriers to sustainable finance. By addressing these challenges, financial markets can play a pivotal role in achieving global sustainability goals and fostering a resilient, inclusive, and equitable economic future.

Keywords: financial market, sustainable growth, environmental measures

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INTRODUCTION

Any market where securities trading takes place, such as the stock, bond, Forex market and derivatives markets, has the designation as a financial market. For capitalist economies to function properly, financial markets are necessary.Financial markets have begun to recognize the need of considering sustainable growth and an eco-friendly strategy when making investment decisions.. The primary goal of financial markets is sustainable growth as to function in a stable environment that lessens the occurrence and severity of events that might cause the financial system to become unstable. Although there is discussion about sustainable economic growth as seen from the perspective of the manufacturing and services sectors, sustainable financial market growth is a relatively recent development, and there is a dearth of literature on "green" financial markets. Financial markets facilitate the flow of cash, determine asset values, and assist with investment choices, all of which have a significant impact on economic results. These markets have historically been built with short-term financial gains in mind, frequently ignoring long-term sustainability factors.However, there have been calls for a change in the way financial markets function due to the increasing urgency of environmental and social issues. Businesses, governments, and investors are searching more and more for methods to incorporate sustainability into financial decision-making while striking a balance between the needs of long-term growth and profitability.The idea of sustainable financial market growth is relatively new, with limited research on "green" financial markets.

Review of Literature

Greenhalgh (2015) observed in his study that market-based financial systems prioritize the demands of the rich while simultaneously ignoring those of the underprivileged. Because only customers with disposable money may generate demand for different goods in the market in a capitalist-driven economy, there is a distinction in how the two consumer groups see the marketplace. He contends that consumers' demands for essentials and pleasures are in competition with one another in the market. Because they are more likely to be able to buy them, the rich will thus often gain more from the use of technology and innovation. Since the market favors the demands of the affluent over those of the poor, there is a greater likelihood of a lack of sustainability as a result of the market's diverse patterns in meeting the requirements of different groups.

Al Mheiri, et al., (2020) revealed in their study that those who are interested in the business as they decide where to invest, allowing it to thrive. Since risky activities have the potential to harm the business, investors allocate their funds in a way that will keep such risks from happening. Social and environmental hazards have a negative impact on investment results and the company's reputation. Therefore, in order to achieve sustainable development, a company must make strategic investment decisions

Chow (2011) demonstrates in his study that by making sure that their resources are applied optimally based on their elements to care for the environment and the community, businesses may accomplish responsible investment. As a result, a lot of investors are more conscious of their firms' social performance. Due to the trend of businesses engaging in social production, investors are drawn to organizations that demonstrate these social performance practices.

Rajan (2016), observed that the changes occurring in the financial institutions have allowed investors to distribute the risk throughout the economy. Improvements in technological areas, deregulation of the financial sector, and the establishment of institutional reforms that have changed financial market transactions and services are a few examples of the advancements made in commercial systems. Globalization is yet another effect of market growth brought about by market advances. International markets and banks are the means by which these markets are growing.

Silver (2017) in their study discussed the sustainability difficulties have also been brought on by the worldwide problems facing the financial markets. In order to attain a sustainable degree of environmental development by reducing ecological footprints, it is recommended that the consumption levels of the impoverished people be raised during this phase.

Environmentally-friendly components of financial markets

It is evident that environmental concerns have taken center stage in the conversation about the sustainable expansion of financial markets. This indicates that evaluations of the operations of financial institutions and their clients are starting to concentrate on elements that are closely related to the environment.

a) Engagement of financial institutions in environmental protection: Financial firms are typically linked to policies that are solely intended to maximize profits rather than taking part in environmental initiatives. The shift in these institutions' philosophies is the consequence of both growing environmental consciousness among those in charge of them and mounting pressure to incorporate environmental consideration

b) Motivation to undertake environmental measures: This is connected to the element listed above. Environmental policies are being implemented more often, not because they are mandated by law but because people who have a significant influence on financial institutions now hold different opinions and attitudes. Owners, shareholders, management boards, and consumers are all included in this category.

c) Environmental products and services:A financial institution that makes environmental concerns a priority in its mission statement has to be able to provide eco-friendly goods and services. In addition to proving the connection between the purpose and practice, this also satisfies the demands and expectations of clients, who base their decisions on investments, for instance, on environmental responsibility.

d) Clients of financial institutions: who are interested in environmental protection : These customers largely create demand for goods and services related to environmental preservation; as a result, their requests of financial institutions may result in tangible offerings.

The aforementioned pieces undoubtedly form a definite structure with distinct internal feedbacks rather than being a loose collection of parts that are unrelated to one another. For example, an organization may raise its clients' knowledge of environmental issues by providing ecologically friendly products and educating them about its eco-friendly practices. Customers begin to anticipate more environmentally friendly goods and services as a consequence. It should be emphasized that most consumers think that financial institutions' eco-friendly initiatives Environmental initiatives may eventually draw in new customers and raise the value of financial institutions' assets, according to their perspective. The environmental engagement of a financial institution may become a strong point of its marketing strategy and promotion campaign in developed countries, where environmental awareness is significantly higher than in developing countries. These campaigns are aimed at more affluent clients who understand the need to take the greatest possible care of the environment and who wish to live an environmentally friendly lifestyle

Financial markets and corporate social responsibility

CSR, or corporate social responsibility, has developed from a voluntary company activity to a crucial component affecting how businesses operate, particularly in the financial markets. CSR is the term used to describe an organization's endeavors to enhance its influence on the economy, society, and environment in addition to its own financial performance. business Social Responsibility (CSR) has become a crucial component of business strategy and a crucial consideration for financial markets as customers, investors, and other stakeholders grow more conscious of the social, environmental, and governance challenges that firms face These domains may be categorized into four groups: product, environment, workers, and corporate governance. Within the aforementioned areas, some examples of operations include

a)Corporate governance:establishing a code of ethics, risk management, an ethical company culture, exposing nonfinancial information (social reporting), combating corruption, and disseminating CSR activities

b)Workers: communicating with workers, maintaining workplace security, guaranteeing ideal working conditions, upholding human rights, and acknowledging the significance of workplace diversity, attention to workers' health, and balancing work and family obligations.

c)Environment: cutting back on gas emissions, managing waste and wastewater responsibly, and using less water and energy.

d)Product: responsible supply chain management, encompassing raw material extraction and transportation, semi-finished product production and transportation, and responsible investment

Socially responsible investment

SRI is a part of a larger movement toward sustainable finance, which aims to support businesses that positively impact society and the environment. SRI is the practice of choosing investments based on both financial return and social or environmental impact. It involves investing in businesses, organizations, or projects that are in line with certain ethical, environmental, or social values while avoiding investments in entities that engage in harmful practices like pollution, human rights violations, or exploitation.

a)Markets and customers – customer service, ethical sales and marketing, supply chain, competitive tactics, product quality and safety, and product innovation (resolving societal issues and conserving energy).

b) Management and information governance – Corporate governance (particularly the independence and competencies of Supervisory Board members, as well as audit and internal control mechanisms), investor relations, anti-corruption policy, code of ethics, compensation of Management Board and Supervisory Board members, timely and transparent reporting, CSR strategy and policy

c)Environment-biodiversity, energy efficiency, water resource efficiency, greenhouse gas emission control, waste management and recycling, and raw material efficiency

d)Employees –Health and safety (accidents, absenteeism), freedom of association, equitable compensation, diversity and nondiscrimination, career development and motivational programs, policy regarding mothers and pregnant women, participation in business decisions, reorganization, employment policy (feedback for non-recruited candidates, excluded persons) and child labor.

e) Social relations —Human rights, charitable giving, social campaigns, educational initiatives, and staff volunteerism.

Conclusion

The concept of sustainable growth is thought to encounter strong opposition in the financial markets from market players, who are linked to cruelty, selfishness, profit maximization, and unethical behavior.Although there are occasionally discussions on the sustainable expansion of financial markets and no clear concept that would characterize the phenomena, we can many terms: socially responsible investment (based on corporate social responsibility), green finance, sustainable finance, responsible finance, green financial market, and sustainable financial system. Although financial markets are frequently thought of as tools for allocating capital, they may also spur good change by allocating funds to initiatives and sectors that put long-term sustainability first.However, there are a number of obstacles in the way of attaining sustainable growth through financial markets. The supervision of financial markets and the implementation of stronger rules in order to avoid severe and protracted destabilization, which frequently turns into a crisis. The whole community appears to understand that sustained growth is impossible. in the economy without the financial markets' steady expansion and their participants' increased environmental consciousness. There should be support to environmental initiatives and the implementation of a new framework for financial market operations. This would not only raise awareness among financial market participants but also support the long-term expansion of the world economy

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