



Gavesana

Journal of Management

Predicting the Presence of Team Cohesiveness Using
Artificial Intelligence: A Case Study of Select IT Companies
in Bangalore

Bhanumathi P
Gayatri Dash

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Entrepreneurial Intentions – With Special Reference to
Bengaluru City

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An Analysis of Earnings Management Through Window
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Influence of Technology on Women Entrepreneurship

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The Gavesana Journal of Management is a bi-annual refereed journal of the Vignana Jyothi Institute of Management. Its objective is to disseminate knowledge of contemporary issues related to management and development. The journal seeks to serve as a platform for intellectuals to share the rapid strides made in contemporary research. The Research Journal has been registered with the Registrar of Newspapers for India (RNI) vide No. 108534/2010 dated 1/3/2011.

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Editorial

I am delighted to present to you the twentieth issue of our journal, "Gavesana - The Journal of Management."

In this issue, we have made an effort to incorporate articles from diverse areas of management while maintaining high standards. This matter exhibits a balanced combination of both theoretical and practical research papers.

The issue would provide additional assistance to the teaching profession in staying informed about the most recent advancements in their respective fields.

There is unanimous agreement that teachers in B schools must consistently engage in high-value research to benefit all stakeholders in B schools. It is widely agreed that teachers in B schools must engage in both high-quality teaching and rigorous research. The journal is an initiative undertaken by the institute to promote high-quality research among the members of the teaching community in B schools. This endeavour aims to construct a repository of articles that are exceptionally enlightening, encompassing diverse aspects of management domains. The journal is anticipated to facilitate the spread of knowledge pertaining to the most recent advancements in different domains of management education. Furthermore, we will strive to incorporate articles that provide valuable insights into pressing matters. An illustrative instance is the matter of sustainability in each and every field, which has captivated the focus of nations worldwide. Researchers consider topics like 'carbon credit, environmental and ecological balance, saving the planet to be highly significant. Given the extensive research in this field, it is imperative to comprehend the complexities of the subject. What is India's position on this matter? We are willing to incorporate articles that contain rigorous research in this field. We plan to address several important subjects in our future issues, including inflation, monetary and fiscal policy, HR practices, international finance, and international marketing, among others. Therefore, we will make diligent endeavours to establish this journal as a platform for disseminating the research conducted by the intellectual community of educational institutions focused on management.

Dr. D Ravinath
Chief Editor,
Gavesana Journal of Management

PREDICTING THE PRESENCE OF TEAM COHESIVENESS USING ARTIFICIAL INTELLIGENCE: A CASE STUDY OF SELECT IT COMPANIES IN BANGALORE

Bhanumathi P¹ | Gayatri Dash²

ABSTRACT

Team cohesiveness is essential to team productivity and the successful building of teams in IT companies. Being multi-cultured and multi-regional, IT companies always face challenges in teaching team cohesiveness due to various human-related factors; therefore, this is considered a critical HRM functionality. The traditional techniques for understanding team cohesiveness have many limitations, which fail to quantify and observe the same properly. In this paper, we present the Artificial intelligence-based method, which leverages data science to predict the presence of team cohesiveness in IT teams. The team cohesiveness in an organization helps maintain better communication and achieve the organizational objectives and goals. It will provide a conducive working environment for all team members to contribute more to the organization. This team cohesiveness furthermore provides job satisfaction among team members. Prediction of team cohesiveness is understanding the team dynamics so that the team leader can make appropriate decisions to magnify organizational and team productivity. Therefore, artificial intelligence (machine learning technology) can empower organizations to streamline teamwork and make it more efficient. The detailed study captured team cohesiveness and its impact on overall organizational performance. The data were collected by administering the questionnaire to build supervised learning models for predicting team cohesiveness. Three different classifiers were used, of which decision tree and random forest classifiers have shown higher prediction accuracy.

Keywords

Cohesiveness, team, performance, organizational productivity

Introduction

Organizational goals and commitment from the workforce to work towards the goals decide the organization's growth. In this regard, when the tasks are assigned to teams, everyone cooperates to achieve the goals fixed for the team. Working oneness will be the key factor to establishing team cohesiveness. Team cohesiveness or cohesion means the degree of the bond between the team members. It explains how well the team members are connected. It covers the components of emotions, unity among members, and social and task relations. Team cohesion is considered a multifaceted process. Understanding the team cohesiveness and quantifying it will challenge project leaders since it involves understanding human behaviors and commitment.

Low cohesiveness will lead to lower attainment of organizational goals. It also means minimal connection and interaction among the team members. Low cohesiveness means team members focus more on themselves, have less coordination and commitment, and neglect the team results.

Team cohesion occurs when all team members collaborate to achieve a common goal. Being a cohesive team means meeting group goals; everyone feels they contributed to the group's overall success. Wendt (2009) discusses that every team member has a sense of belongingness and is motivated to attain a team goal.

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The best indicators for any cohesive group are as follows:

- Quick conflict resolution -The higher the cohesiveness, the better the members resolve conflict.
- A solid sense of "we."
- Team members are accountable for the tasks performed
- Cohesive team members will focus on the organization's larger objectives and are less likely to get distracted.
- Strong, cohesive teams realize that trust is the essential component.

Bedir (2023) opined that successful team cohesiveness results from many factors, some mentioned below.

1. Like-mindedness: Team members should possess Inclusivity and consistently commit to the goal.
2. Dialogue: Inter and intra-team communications should follow certain meaningful logic.
3. Background: Leveraging experiences from various sources and channels and creating workable ideas is essential.
4. Confidence: Expressing mutual trust in a team and unanimous decision-making.
5. Goals and ambitions: Setting reasonable team goals would help improve team cohesiveness.

Managers choose various leadership games and activities, ice-breaking games, team-building games, and employee engagement activities to improve team cohesiveness. A team is said to be in cohesion if it exhibits trust, conflict resolution, commitment, accountability, and tangible results. If the team lacks diversity, equity, and Inclusivity, then the team is said to be poor in cohesiveness. The impact of poor team cohesiveness is;

1. It lowered team outcomes regarding the quantity and quality of results produced.
2. Unrealistic goals would demoralize the team.

The augmentation of Artificial Intelligence (AI) in Human Resource Management functionalities is an ongoing trend in business administration. Many studies are carried out to understand how AI can be positioned to improve team cohesiveness. By nature, AI has been deployed as a replacement for routine tasks, which has increased the productive time of team members, thereby reducing the team's efforts on mundane tasks. AI also enables the members to build collaborative platforms for sharing data, ideas, validation, etc..

Strategies Essential to Develop Team Cohesion

Team cohesion leads to increased productivity. Salas(2004) said strategies help team leaders or small business owners encourage employees to have better team cohesiveness. Strategic plans are discussed in detail below.

- Hiring strategy: There are two ways through which leaders can form teams. Either recruit members from within the organization or hire new people outside the firm. Irrespective of the approach they adopt for developing the team, they should focus on how well the prospective employee can engage, understand the team dynamics, and contribute. An employee should be skilled and able to coordinate and work cohesively within the team.

- Valuing everyone's work and team contributions

Every team leader's responsibility is to encourage and motivate their team members to participate actively. Team member involvement leads to massive success by learning and understanding other team members' expertise as they are good at technical, administrative, and financial-related skills to reach their full potential. The leader should value every member's contributions for better team cohesiveness.

- Empowering the team

The team leader should give every group member certain powers and authority, i.e., empowering all. Delegation of authority and responsibility to each team member helps to increase the team cohesiveness.

- Resolving the conflicts

The team leader should focus on constructive conflicts that lead to a healthy working environment and

update their skill sets and knowledge. Commonly, group members will face many challenges during the organization's functioning. The leader should encourage members to discuss and understand the nuances of the situation and act accordingly, which further supports all and develops team harmony. The conflicts arising from petty things need to be resolved immediately as and when they occur.

- Define goals and values.

The leader should work on the team goals and company values by clearly understanding the team dynamics. Identification will give the team leader a clear, shared picture of what team members are working toward, in what manner, and for what purpose. It also lets the leader determine team members' views and opinions about the organizational goals.

- Conducting training and development

For team cohesion to be strong, every team member should feel competent enough to contribute to the success and to achieve the organizational goals. Proper induction and training are to be conducted for the new hires so that they are clear about the roles and responsibilities to compete and accomplish.

- Encourage team-building

The leader should work on boosting the morale and self-esteem of team members, not just treating them as mere professionals. Leaders should initiate team-building activities, which gives a path to build empathy and respect for team members for better team functioning.

- Increase communication

One of the factors for team failure is improper communication or collaboration in the workplace. Teams can contribute effectively through continuous, clear communication. The team lead should support members in reaching out to everyone, brainstorming ideas, and connecting conveniently.

- To build trust

To build trust among team members, the leader must provide precedent and a transparent working environment. Without transparency, teams will become disunity-frustrated, and errors will creep in. Team cohesion doesn't occur if the team leader unintentionally keeps secrets. As a leader, ideas are encouraged and supported among the team so that the team can work effectively.

- Celebrate success together

Celebrating the success of the team helps maintain a cohesive unit. Leaders should appreciate and thank team members for their effort and hard work and recognize that everyone has played a role.

Factors Influencing Team Cohesion

A. Shared goals and like-mindedness of team members:

Team members should share similar beliefs and attitudes, which is one factor that keeps the team together. One essential variable that contributes to team cohesiveness is the existence of similarity. A cohesive group encompasses members who have similar interests and intentions but can be from different backgrounds.

B. Team size :

Small teams will have a higher level of cohesion than larger ones. Clear communication and effective engagement of members are possible in small teams, which further helps members bond. The interaction will not be that effective in the case of larger groups; reaching a consensus on many issues, concerns, and problems is more challenging.

C. Time:

The strength of the team grows as they interact and spend time together. The higher the bond, the better the teamwork, as it allows everyone to understand and know each other.

D. Threats and Competition:

If the team faces any obstacle, they will face the situation in a coordinated way that strengthens the

team. Team members will keep their differences aside and work together to solve problems.

E. Interaction and communication in the team:

Effective interaction, discussion, and communication will help solve the problems and contribute more to the organization, Reddry (2022).

F. Trust:

For a cohesive group, members have high confidence, trust, and reliability. Individual team members must have faith in their decisions to upshot a positive impact and bring a constructive transformation. Belief and trust unite the team members, allowing undisputed decisions.

Downsides Of Team Cohesiveness

A. Absence of Creativity:

Cohesive team members are from the same employment and have similar ideas and views. There is no room for creativity. As a result of the group's cohesive behavior, the organization's creative elements may suffer.

B. Lack of Innovation:

Innovation is associated with creativity. Lack of innovation will be directly related to decreased creativity. Because of a lack of innovation, the final result in terms of creation may suffer by Reddry (2022).

C. Domination:

With the existence of a team, leader supremacy occurs. Leader dominance is never valuable to the firm and can impair the team. Consequently, leaders recognize that they must treat their team members as equals if needed and want them to follow their instructions Reddry(2022).

Literature Review

The study by Stashevsky(2006) showed the relationship between transformational leadership and its impact on team cohesiveness. The study identified the critical antecedents of team cohesiveness, such as leadership style and knowledge level. The study also focused on understanding team cohesiveness among men. The work from Gordon (2022) focuses on the impact of AI personality assessment during team formation. They suggested using AI-based personality tests before formulating teams for better team cohesiveness. The outcomes of the work carried out by Gyory (2022) include a more profound understanding of systematizing rapid process management and the efficacy of artificial intelligence in filling the roles in process management.

Hoet (2018) studied group dynamics on a massive scale using social psychological theory and data-generating algorithms. Wendt(2009) focused on the relationship between leadership and team cohesiveness with respect to various socio-cultural factors of the organization. They have shown that team cohesiveness is adversely and positively associated with directive and supporting leadership. McClurg's 2017 study lists several challenges when examining team cohesion in any organization, such as the nature of team events, team cohesion dimensions, and inappropriate self-report measures.

Shmuel Stashevsky (2018) study found that transformational leadership leads to higher team cohesiveness. Team cohesiveness and knowledge level are both predictors of team success—performance, especially in men. Wendt (2009) investigated a positive relationship between leadership and team cohesiveness for socio-cultural aspects. The study also inferred that the socio-cultural aspect affects team cohesiveness. The level of team cohesion has nothing to do with IC. Team cohesiveness has a positive association with supporting leadership.

Gagan Bansal (2019) concluded that decisions made by human-AI teams are becoming more widespread in high-stakes fields, including healthcare, criminal justice, and finance. More than AI, the system's precision is required for excellent team performance. Knowing this lets the person determine whether to

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accept or reject the AI's recommendation.

Abhilasha Singh's (2021) study examined firms' forced adaptation and reinvention of various activities due to social trends and IT. Artificial intelligence (AI) has become increasingly popular. The study plans to analyze and examine the impact of Artificial Intelligence (AI) on HR practices in the UAE organizational setup. Artificial intelligence (AI) helps transform HR activities into the digital world.

Ganotice (2022) emphasized team cohesiveness and efficacy, resulting in high-performing teams. This mechanism is vital to teachers and program managers to produce supportive interventions to optimize team outcomes. The study was on interprofessional education (IPE) in medical education. A hypothesized model of team cohesiveness predicts outcomes of team performance, the satisfaction of the team, and overall goal attainment.

Rapinsarda (2002) study focused on the degree of emotional competence of a team member. The study further emphasized whether employee interactions build team cohesiveness and higher performance. It examines the relationship between the average score of members on 13 EI (Emotional Intelligence) competencies. The research indicates a positive relationship between empathy, achievement orientation, and team performance.

Hasan(2021) focused on determining the influence of a team and its management on the organization's performance.

The research study aims to identify the various aspects that affect organizations' performance. Correlation and regression analysis were adopted to check the relationship between variables. The results showed that only team decisions significantly positively influence organizational performance. Finally, the study suggested a need to give full attention to team management in organizations to enhance organizational performance.

Wijaya's (2023) study is on how the eruption of the COVID-19 pandemic was the reason for hindrance to survival. The main challenge is working with the senior generation employees while implementing and adopting new technology. The leaders should be aware of technology and how to encourage and make team members tech-savvy. The study shows that transformational leadership is more directional to all organizational employees to accomplish targets and goals than transactional leadership. This study also intends to investigate the effectiveness of leadership styles for digital leaders in nurturing team cohesiveness in an organization. The study concluded that transformational leadership models will affect the motivation of the employees in the workspace, which further influences cohesiveness in the team.\

Paracha(2022) aims to explore the unintentional effect of leader-member exchange between team-focus transformational leadership – project success relationship. Also, this study scrutinizes the moderation of team cohesiveness between team-focus transformational leadership – leader-member exchange relationship and leader-member exchange – project success relationship.

Mishra(2023) studied the mediating role of employee commitment in the relationship between the team's culture and performance at various levels. Research interprets the employee's responsibility and obligation and suggestively mediates the relationship between culture and job performance across the group. Studies also claim that team cohesion and camaraderie establish a solid organizational culture.

Cai (2023) focused on team cohesiveness and effectiveness and how to strengthen the perceptions in the post-pandemic period. The various challenges of virtual teamwork collaboration and workplace isolation will arise in organizations, and it can be talked about by coordinating and maintaining cohesiveness and effectiveness in the team. More importantly, this study opens the forum for future research opportunities on management interventions that can help augment the cohesiveness and effectiveness of the team at

Fullagar (2008) explored and investigated the relationship between group cohesiveness and performance. Data on performance and cohesiveness were collected and analyzed using a hierarchical linear model. The study interpreted that there is a direct relationship between group performance and cohesiveness, which further leads to group development.

Dash's (2023) research focused on whether mindful and cohesive employees are more likely to hoard knowledge. Acquiring and sharing knowledge is the need of the hour in today's workspace. As knowledge hoarding is a generic, nonintentional behavior, specific attitudes and organizational processes are unlikely to curb it. The mindfulness and cohesiveness of the team were positively correlated, which further increased meaning-making through work.

Statement of Problem

The application of newer technology has helped the organization to compete well in the business. It also helped to manage the organization's internal activities by simplifying work. Organizations are finding it difficult to understand the coherence among group members. A cohesive team talks about accomplishing group goals and gives everyone a sense of contribution to the organizational success. Working as a coherent team helps to overcome setbacks and challenges and to accelerate productivity. Prediction of team cohesiveness is essential for correctly understanding the group dynamics so that the team leader can make decisions to amplify productivity. The traditional approach of identifying team cohesiveness has many issues that do not cater to the organizational requirements.

Therefore, artificial intelligence (machine learning technology) can empower organizations to streamline teamwork and make it more efficient. The study focuses on Predicting team cohesiveness using Artificial Intelligence in the IT sector.

Research Questions

1. How can we predict team cohesiveness using artificial intelligence?
2. What are the various factors that contribute to team cohesion /cohesiveness?
3. What are the different levels of team cohesiveness?
4. Does team cohesiveness affect team performance/productivity?

Research Objectives

The main objectives of the study are:

- To identify the factors that contribute to team cohesion/Cohesiveness
- To study how team cohesion affects team performance/productivity
- To predict the presence of team cohesion using AI
- To provide suggestions to improve team cohesion in the IT sector

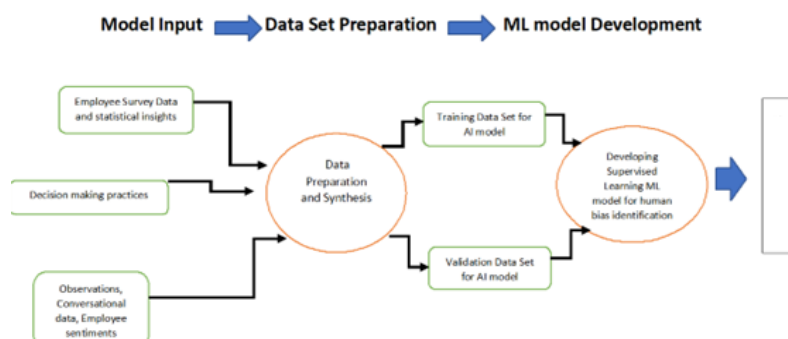
Conceptual Framework

The proposed study will focus on the supervised type of machine learning, the most popularly used AI tool for classification and prediction. The methodology starts with detailed data sample collection by administering the questionnaire and later building an ML model, including training and validation. The ML

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results will identify the presence or absence of team cohesiveness in an organization. The results are visualized statistically to draw insights. Finally, the model was validated for its accuracy and applicability. The conceptual framework for the study is given in Fig 1

Fig1: Conceptual framework for the study



The details on various phases of Machine learning proposed to be used in the present study are given in Fig 2 below.



Fig 2: Machine learning model.

Hypothesis of the Study

Ho: AI-based solutions will not predict team cohesiveness in the workplace

H1: AI-based solutions will predict team cohesiveness in the workplace.

Research Methodology

The research design was descriptive, observing and describing team members' behavior in an organizational setup. The scope of the study was to cover the IT firms in Bangalore. Convenience sampling was used to identify IT firms in Bangalore. The samples were collected from new and existing employees. Two hundred responses from IT firms were considered. Primary data was collected by administering a detailed questionnaire. Secondary data was from articles, magazines, and websites. Qualitative and quantitative data were collected by developing a questionnaire. The pie chart and bar graphs were plotted to analyze the data, and a Machine learning model was developed to predict team cohesiveness in the workplace/organization. Regarding the questionnaire development, the proposal focused on developing situation-based questions to answer, which are administered to employees and managers to understand the low levels of team cohesiveness. Medium and high levels of team cohesiveness.

A questionnaire was developed to study the factors contributing to team cohesion and how it affects team performance. The questionnaire has three sections. The first section focused on the demographic details, namely gender, age, educational qualification, occupation, and respondent's monthly income. The second section was developed to identify the factors contributing to team cohesiveness and the advantages and challenges faced in having team coherence. The third section was on psychometric questions predicting low, moderate, and high team cohesiveness.

Situational questions were designed and developed to understand the employee's mindset toward the team,

how well they can coordinate, the extent of interpersonal connection with the team, and their contribution to the group.

For example:

A team has to be formed to deliver a particular project. Who is most likely to be picked for the team?

-team members who have similar interests, who can share successes, who have common goals and mutual trust, are a diverse group and are responsible (High Cohesiveness)

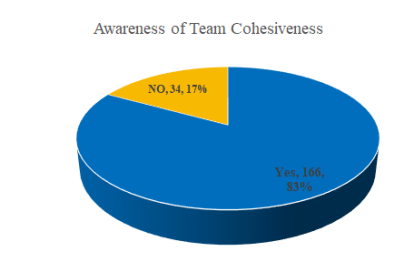
-team members based on the task without sufficient regard for the needs of team members (Moderate cohesiveness)

-Team members on a random basis without any concrete base. (Low cohesiveness)

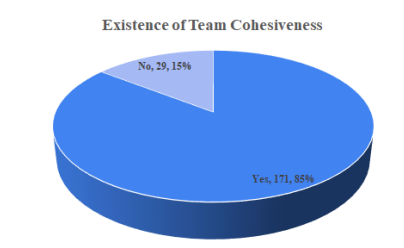
On similar lines, several situation-based questions were designed for the same.

Discussions

The study focused on identifying the presence of team cohesiveness in an organization, especially in the IT sector. The study showed 83% (Graph 1) of respondents were aware of team cohesiveness, and 34% were unaware. It was found from the survey that 85% of the respondents (Graph 2) agreed that team cohesiveness exists, and 15% of the respondents felt that the organization has no team cohesiveness. It can be inferred that many respondents are aware of team cohesiveness and are working cohesively to contribute to organizational growth and performance. Few of the respondents were unaware that even though they were practicing, an awareness program was to be initiated so that they could contribute further towards organizational success.



Graph 1: Awareness of team Cohesiveness

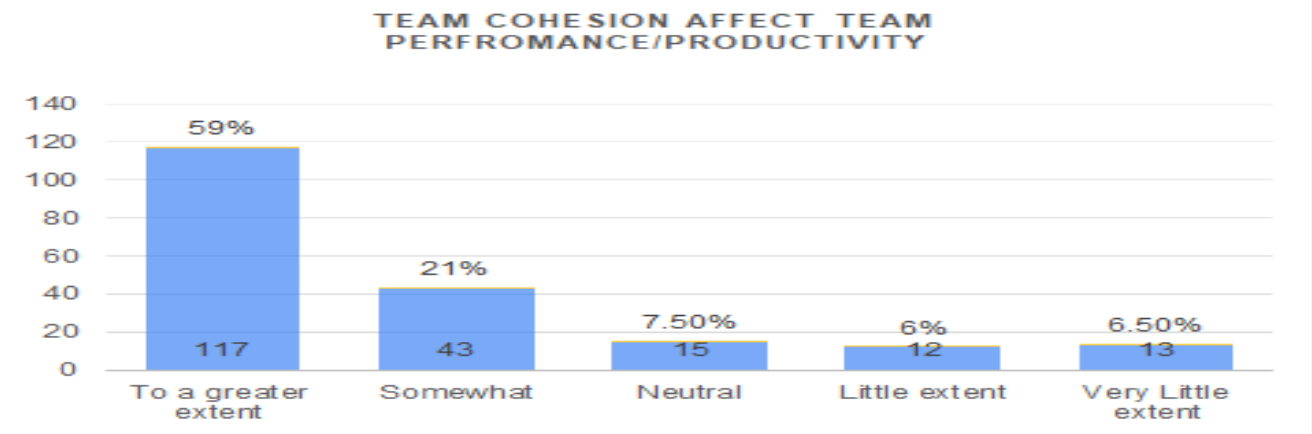


Graph 2: Existence of Team Cohesiveness

The study also found that team cohesiveness is essential for any organizational setup. Team cohesion or cohesiveness helps to enhance the team's communication and sharpens the ability to realize the objectives and goals of the organization. It decreases the need to micromanage a team, allowing managers time to create an encouraging working environment. Also, it will help to optimally utilize resources owing to the efficiency and effectiveness of the team to increase employee satisfaction with jobs that are part of a cohesive team.

The researcher realized from the study that cohesive high-level teams would perform better than less cohesive teams. The factors contributing to team cohesiveness were open communication among team members, the similarity between members' interests, shared successes, role clarity, common goals, clear priorities, mutual support, and building on strengths. Also, learning from mistakes, diversity, autonomy, and shared responsibilities were the factors.

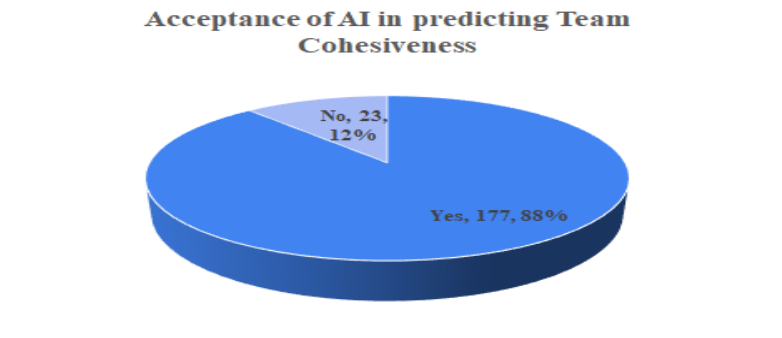
The study found that team cohesion increases when team members solve conflict quickly, have a strong sense of "we," when they focus more on organizational objectives (Organizational prioritization), and are oriented.



Graph 3: Team cohesiveness affects team performance /Productivity

From Graph 3, it was clear that 59% of the respondents opined that team cohesiveness affects the team's performance /productivity. 21% of the respondents stated that team cohesion affects team performance /productivity to a somewhat level, and 7.50% of respondents' opinions are neutral. The study shows that many believe team cohesion affects team performance /productivity. The organization should take measures to make employees realize the importance of team cohesion. The study found that team cohesiveness affects team performance/ productivity (Graph 3) in various ways, precisely a stronger sense of commitment of employees towards goals that motivate higher individual effort and performance of the team.

Also, it was found that greater team cohesiveness results in higher satisfaction levels. It reduces anxiety and tension among team members, increases team efficiency, lowers rates of absenteeism in teams, lowers turnover rates, allows team members to experience greater job satisfaction, and results in more consistent individual productivity outcomes within the group. It enables team members to work well together and feel they contribute to the group's overall success. Most respondents were willing to use AI to predict team cohesiveness. They believe that AI will help understand team dynamics and foster cohesiveness for organizational success.



Graph 4: Acceptance of AI in Predicting Team Cohesiveness

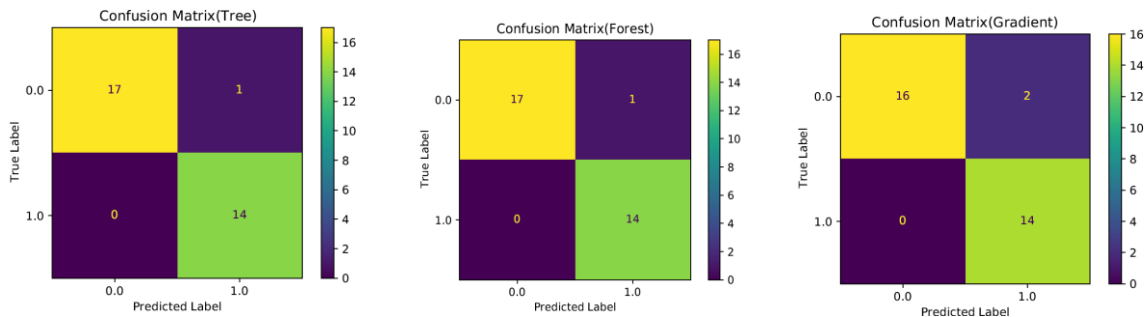
From Graph 4, it was found that most respondents were ready to use AI to predict team cohesiveness. Very few are unwilling to accept the AI prediction of team cohesiveness. It is the need of the hour. Employees should be equipped with technical skills and various technological tools as technology advances daily. This tech tool will help employees to get accurate results at a faster rate.

The machine learning model was to identify the team's cohesiveness. This model was developed based on the employee responses to open and closed-ended psychometric questions. The psychometric questions

were designed to identify team cohesiveness. It was mapped to three levels: high-level, moderate-level, and low-level.

The final labeling of employees' responses for training the machine learning model was low, moderate, and high. The levels were divided into two classes: team cohesiveness and no team cohesiveness.

Three machine learning models were developed based on the responses received from the questionnaire administered: decision tree, random forest, and gradient boost.

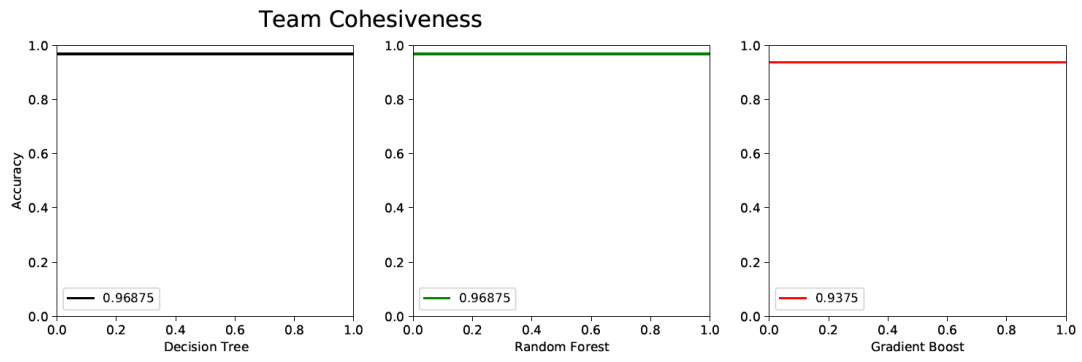


Three machine learning classifiers were used to develop and train the model: 1. Decision tree, 2. Random Forest, and 3. Gradient boost. After dividing the available responses into training, testing, and validation sets, the classifiers have identified the necessary hyper-parameters. From the 200 responses obtained, 80% of the data set was for training, and 20% of the data was for testing the model.

Graph 5: Confusion Matrices of three models

The following tabulated results show the accuracy, precision, and recall obtained on the test data. (Graphs 5 & 6)

Graph 6: Accuracy of three models



Classifier Name	Accuracy	Precision = TP/(TP+FP)	Recall = TP/(TP+FN)
Decision tree	0.9687	17/(17+1) = 0.9444	17/(17+0)= 1
Random Forest	0.9687	17/(17+1)= 0.9444	17/(17+0)=1
Gradient Boost	0.9375	16/(16+2)= 0.888	16/(16+0)=1

sources: Authors' own

Where TP-True Positive, FP-False Positive, FN-False Negative.

The above-tabulated results show that the decision tree and random forest correctly classify the responses since the recall is the same for both the classifiers, i.e., 1. The accuracy of the random forest and decision tree boost remains at 0.9444, which shows we have fewer false negatives during classification. Hence, the

Suggestions and Conclusions

The primary intention of the study is to show how machine learning models can be used to predict team cohesiveness. This task was executed by designing the questionnaire, which calls the employees to answer some of the psychometric questions designed to test the existence of team cohesiveness. The values were assigned based on the responses to these questions, and later, machine learning models were created for prediction.

This study's outcome shows that any sector linked with IT and its managers can easily leverage Artificial Intelligence to build machine learning models to predict team cohesiveness. Nowadays, a machine learning model is built with minimum effort using available cloud-based services. The primary requirement is creating the proper dataset and labeling the data for training. It is also essential that managers conduct periodic surveys in their organizations to understand the cohesiveness of their employees' teams in the workplace. The AI approach will enable managers to identify the existence of team cohesiveness in an organization. The AI approach allows managers to create a positive working environment and provide active engagement, which reduces employee turnover and helps lower recruitment costs.

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ENTREPRENEURSHIP EDUCATION AT UNIVERSITY LEVEL AND STUDENTS' ENTREPRENEURIAL INTENTIONS – WITH SPECIAL REFERENCE TO BENGALURU CITY

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Abstract

University-level entrepreneurship education is an important in shaping students' goals and techniques toward entrepreneurship. In instruction towards investigate the relationship between students' entrepreneurial impulses and entrepreneurship instruction, this study uses a quantitative methodology. Surveys were used to gather information from a sample of university students in order to evaluate the effects of entrepreneurship education on students' perceptions of the viability of entrepreneurial ventures, attitudes toward entrepreneurship, and intentions to pursue entrepreneurial activities after graduation. The strength and direction for interactions remained measured via statistical approaches, Examples include regression investigation and correlation approaches. The results show a strong positive link between students increased entrepreneurial intentions and their exposure to entrepreneurship education. The study also emphasizes the value of practical elements in entrepreneurship education programs, like mentorship programs and experiential learning opportunities, in fostering students' entrepreneurial goals. This study advances our understanding of how entrepreneurship education influences students' aspirations to become entrepreneurs and provides practical advice on how to encourage university students to adopt entrepreneurial attitudes and practices. The changing demands of the modern work and lifestyle landscape have led to an increase in the importance of entrepreneurship education. Three universities were chosen as research locations for this study. After pilot testing and some minor instrument tweaks, surveys were formally distributed between January 25 and February 3, 2024. The questionnaire was divided into sections for the primer, partaker data, inspection questions about the quality of free enterprise education, student goals for entrepreneurship, and student self-efficacy in five different categories. Out of the 150 survey questionnaires distributed, 93 percent were returned, yielding 143 responses. Ninety-one percent of the replies, or 137 out of the total, were declared useable after questions with inadequate data were eliminated. Of the people surveyed, 35 percent were female students and 65 percent were male students. Additionally, a moderate but positive association of 0.359 was seen with practicum. Additionally, course attendance shows somewhat favorable associations with all other variables, ranging from 0.239 to 0.403. The degree of association between entrepreneurial intention and other variables ranges from 0.240 to 0.537, with goal-setting exhibiting the highest correlation (0.537). Furthermore, Table 4 demonstrates that, at the 5% level of significance, the calculated figure of χ^2 (7.3580) is bigger than the bench figure of χ^2 (3.84). Therefore, the findings suggest a robust positive correlation between students' entrepreneurial aspirations and entrepreneurship education, leading to the rejection of the null hypothesis (H_0).

Keywords: higher education, entrepreneurship, purpose, and self-efficacy in making business choices.

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Introduction

In today's rapidly changing world, characterized by dynamic job markets and technological advancements, the ability to think indicatively, identify opportunities, and take proactive steps is indispensable. Entrepreneurship education equips students with the mindset, skills, and knowledge necessary to navigate uncertainties, adapt to changes, and capitalize on opportunities across various professional domains.

Furthermore, the significance of entrepreneurial qualities extends beyond launching businesses. These traits encompass resilience, resourcefulness, problem-solving abilities, and effective communication skills—attributes that are valuable in any career pursuit or life endeavor. Whether students aspire to become entrepreneurs, innovators within organizations, or contributors to social change, entrepreneurship education empowers them to thrive in diverse contexts. Entrepreneurship education encompasses a spectrum of definitions, ranging from narrow to broad interpretations. In its narrower sense, it involves the recognition of opportunities, the strategic allocation of resources amidst risk, and the development of a business venture (Kourilsky, 1995). Conversely, broader definitions view entrepreneurship education as a structured framework of teachings designed to inform, train, and educate individuals concerned fashionable commercial formation or else minor commercial growth.

On a larger equal, free enterprise teaching extends beyond traditional business paradigms, aiming to cultivate not only entrepreneurial individuals who may establish and manage their enterprises but also those who can apply entrepreneurial principles within various contexts. This broader perspective, as articulated by Gibb (2002), emphasizes the development of an "entrepreneurial person" capable of exhibiting enterprising behavior, whether as a self-employed individual, an enterprise owner, or as an innovative contributor within an organization.

This broader conception of entrepreneurship education aligns with current calling notions such by way of the variable job, the boundary-less job, the post-corporate job, then employability (Gelderen et al., 2008). These concepts underscore the importance of flexibility and adaptability in navigating the contemporary labor market. Entrepreneurship education, therefore, equips persons through the assistances and attitude required towards flourish trendy diverse career trajectories, emphasizing agility, creativity, and an entrepreneurial approach to problem-solving and innovation.

Literature Review

Entrepreneurship education has been recognized as a critical driver of entrepreneurial intentions among university students (Fayolle & Gailly, 2008). Through exposure to entrepreneurship courses, workshops, and experiential learning opportunities, students acquire the necessary knowledge, skills, and attitudes conducive to entrepreneurial endeavors (Krueger et al., 2000).

Research suggests a positive correlation amid free enterprise teaching and students' business purposes. Studies have observed that students enrolled in entrepreneurship programs exhibit higher levels of intention to start their ventures compared to their peers without such exposure (Liñán & Chen, 2009).

The institutional environment plays a crucial role in shaping students' entrepreneurial intentions and behaviors. Universities offering robust entrepreneurship ecosystems, including incubation centers, funding opportunities, and mentorship networks, have been found to positively influence students' perceptions of entrepreneurship (Peterman & Kennedy, 2003).

Cultural and contextual factors also influence the effectiveness of entrepreneurship education initiatives. In the context of Bangalore City, with its rich entrepreneurial culture and vibrant startup ecosystem, students may be more inclined towards entrepreneurial pursuits due to greater exposure to role models, networking opportunities, and resources (Dwivedula et al., 2010).

Despite the growing emphasis on entrepreneurship education, challenges persist in effectively bridging the gap between academic learning and real-world entrepreneurial practice. Issues such as limited access to resources, faculty expertise, and industry collaborations pose significant barriers near the effectiveness of EEP (Kuratko, 2005).

Research Aims

1. To assess the association amid educational entrepreneurship then students' entrepreneurial intentions
2. To evaluate the association amid educational entrepreneurship then Self-efficiency in entrepreneurial decision making

Hypotheses

H01. There is no relationship between educational entrepreneurship and student's entrepreneurial intentions

H02. There is no relationship between educational entrepreneurship and self-efficiency in entrepreneurial decision making.

Research Methods

Three prestigious universities, namely Presidency University, Reva University, and ICFAI University, were selected as research sites for this investigation. These universities are distinguished by their esteemed reputation and stable standing compared to other institutions. Pre-existing survey instruments underwent modifications to incorporate relevant questions, following which pilot testing was conducted to validate the instruments. Subsequently, the research team officially administered surveys from January 25th to February 3rd, 2024. The questionnaire encompassed several sections, including an introductory segment, participant demographics, survey items evaluating students' level of entrepreneurship education, self-efficacy across five domains, and entrepreneurial objectives. Responses were solicited using a 5-point Likert scale. Out of the 150 distributed survey questionnaires, 143 responses were received, translating to an impressive response rate of 95%. Of these, 137 responses were deemed usable, representing 91% of the total responses after the exclusion of incomplete questionnaires. Among the respondents whose surveys were included in the analysis, 65% were male students, while 35% were female students

Independent Variable

Conferring to our research, the amount of EE entrepreneurship education) that students obtained in college served as the independent variable for entrepreneurship education. The two components of this education were taking an entrepreneurship-related course (referred to as the course taking hereafter) and participating in entrepreneurship-related activities (referred to as the practicum later). The measuring questions were developed taking into account the present state of entrepreneurship education in Bangalore institutions.

Dependent variable

"In this study, dependent variables are considered in two categories: (1) Entrepreneurial Intention and (2) Self-Efficacy in Entrepreneurial Decision Making."

Entrepreneurship Education

The term "entrepreneurship education" describes a variety of educational programs and initiatives meant to foster more entrepreneurial mindsets and abilities. The Job Generation Process, a 1979 research paper

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written by Massachusetts Institute of Technology researcher David Birch, demonstrated the value of entrepreneurship in creating novel job possibilities then fostering fiscal growth. This paper has sparked a contentious debate about entrepreneurship education in higher learning as well as society at large, further advancing the subject at colleges and universities.

Entrepreneurial Intention

Entrepreneurial intention" refers to a person's subjective perspective of their willingness to launch their own company, which encompasses their behavioural inclinations and mental state of "willingness to venture." By use of empirical investigation.

Self-efficacy

The term "self-efficacy" refers to a broad concept of self-appraisal that requires clarification in light of specific circumstances.

Self-efficacy in entrepreneurial decision-making refers to a person's subjective assessment and confidence in their ability to choose a vocation during the career selection process.

Conceptual Research Framework and Research Hypotheses

Using Ajzen's (1991) Theory of Planned Behavior (TPB), a dependent variable chosen in the research's examination of the entrepreneurial intent was validated. Two popular models for researching the effects of college on students were employed in this study to elucidate the relationships between the variables under investigation: The study looked at the association between entrepreneurship education and students' entrepreneurial intentions while controlling for variables such as educational backgrounds. It used Astin's (1993) Input-Environment-Outcome (I-E-O) model and Pascarella's (1985) causal theory to analyze how entrepreneurship education impacts students' intentions to pursue entrepreneurship, while considering various input variables such as educational backgrounds. These models were especially utilized to find the interactions among the variable under examination. The two components of entrepreneurship education were identified as taking entrepreneurship courses and taking part in practicums.

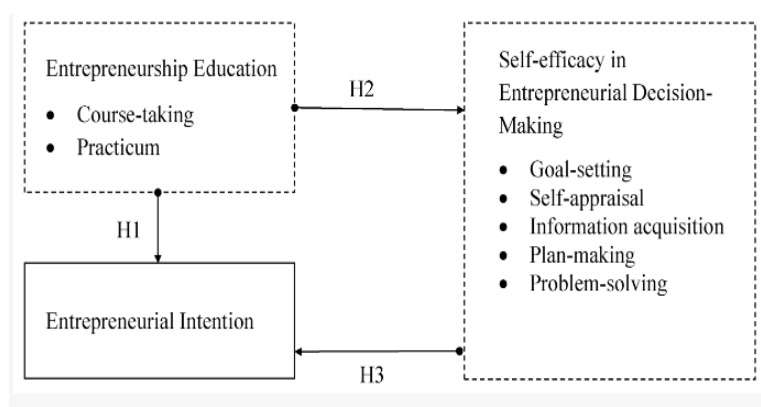


Figure 1. Conceptual research framework

Data Analysis & Interpretation

After correlational examination of the study's variables, we used correlation analysis to investigate the association amid scholar EE then their self-efficacy in entrepreneurial managerial Plans . correlation analyses were then carried out to investigate the relationship between student self-efficacy and the desire to launch a business in more detail. In the last block, the confidence of students in business decision-making was integrated into multiple regression models to evaluate the association between entrepreneurship

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education and entrepreneurial intention. Finding out if student self-efficacy in making entrepreneurial decisions acted as an intermediary was the aim of these analytical approaches. As seen in Table 1, all of the variables' bivariate correlations fell below the accepted cutoff point of 0.7. In addition, acceptability statistics for each independent variable were greater than 0.5, and variance inflation factors were less than 2.0. These results suggest that difficulties with multicollinearity were not encountered in this investigation.

Table 1. Correlation matrix of variables.

	1	2	3	4	5	6	7	8
1. Practicum	1.000							
2. Course-Taking	0.339 *	1.000						
3. Entrepreneurial Intention	0.243 *	0.339 *	1.000					
4. Goal-Setting	0.195 *	0.242 *	0.527 *	1.000				
5. Self-appraisal	0.165 *	0.242 *	0.470 *	0.546 *	1.000			
6. Information Acquisition	0.203 *	0.312 *	0.381 *	0.479 *	0.623 *	1.000		
7. Plan-Making	0.162 *	0.306 *	0.471 *	0.547 *	0.675 *	0.691 *	1.000	
8. Problem-Solving	0.118 *	0.264 *	0.492 *	0.434 *	0.609 *	0.555 *	0.679 *	1.000

Notes: N = 137, * $p < 0.01$ (two-tailed).

Source: Authors calculations

Table 1 indicates that it has a correlation of 0.359 with Practicum, indicating a positive but moderate correlation. Course taking has positive correlations with all other variables, ranging from 0.239 to 0.403. These correlations are also moderate. And also observed that Entrepreneurial Intention has correlations ranging from 0.240 to 0.537 with the other variables, indicating moderate positive correlations. The highest correlation is with Goal-Setting (0.537). the goal setting It shows positive correlations with all other variables, ranging from 0.194 to 0.587. The highest correlation is with Self-appraisal (0.587). Ultimately, a favorable result is reached, suggesting that when one factor goes up, the other also likely to rise. The relationships range in intensity from modest to quite high, though.

Testing of Hypotheses

Hypothesis testing: H01

Table 2
Observed Frequency

VARIABLE	YES	NO	TOTAL
Male	81	12	93
Female	35	15	50
TOTAL	116	27	143

Source: Primary Data

Table 3
Expected Frequency

VARIABLE	YES	NO	TOTAL
Male	75	18	93
Female	41	9	51
TOTAL	127	16	143

Source: Primary Data

Table 4
Chi -Square test Value Evaluation

O	E	O-E	(O-E) ²	(O-E) ² /E
81	75	6	36	0.48
12	18	-6	36	2
35	41	-6	36	0.878
15	9	6	36	4
				7.358

Source: Authors Calculations

Table 4 shows that, at the 5% significance level, the computed value of χ^2 (7.3580) is greater than the table value of χ^2 (3.84). As an outcome, the null hypothesis (H₀) is rejected, and it is discovered that there is a noteworthy optimistic association among students' entrepreneurial objectives and educational entrepreneurship.

Hypothesis testing: H₀₂

Table 5
Observed Frequency

VARIABLE	YES	NO	TOTAL
Male	74	19	93
Female	32	18	50
TOTAL	106	37	143

Source: Primary Data

Table 6
Expected Frequency

VARIABLE	YES	NO	TOTAL
Male	69	24	93
Female	37	13	50
TOTAL	127	16	143

Source: Primary Data

Table 7
Chi -Square test Value evaluation

O	E	O-E	(O-E) ²	O-E)
74	69	5	25	0.36232
19	24	-5	25	1.04167
32	37	-5	25	0.67568
18	13	5	25	1.92308
				4.00274

Source: Authors Calculations

At the 5% level of statistical significance, Table 7 indicates the computed value of χ^2 (4.00274) is greater than the one shown in the table value of χ^2 (3.84). As a result, the null hypothesis, or H_0 , is disproved, showing that self-efficacy in entrepreneurial decision-making and academic enterprise have a substantial positive association.

Conclusion

In conclusion, both of the investigated hypotheses show a strong positive correlation between educational entrepreneurship and students' ambitions to start their own businesses and their sense of self-efficacy while making business decisions. These results imply that educational programs promoting entrepreneurship have a beneficial impact on students' inclinations to pursue entrepreneurship and increase their confidence in their ability to make wise business decisions.

DIGITAL FINANCIAL INCLUSION OF WOMEN MICRO ENTREPRENEURS - A LITERATURE BASED APPROACH

S. Indira kumari¹ | Dr. P. Suganda Devi²

ABSTRACT

This study is aimed to understand available literature on digital financial inclusion of women micro entrepreneurs and problems and benefits of digital financial inclusion. In order to carryout this study a thorough analysis of available literature was done. Secondary data sources are extensively used to identify problems faced by women micro entrepreneurs in the development of financial inclusion from a digital perspective. The study concluded that several challenges such as Limited Digital Literacy, Cultural Barriers: Unequal Access to Technology, Financial Constraints and -Gender bias restricted availability of mobile devices, access to the internet, understanding of digital technologies, in Financial Institutions are encountered by women micro entrepreneurs. At the same time a number of benefits such as -Increased Access to Financial Services, Enhanced Business Efficiency, Expansion of Market Reach, empowerment and Independence, Reduction of Transaction Costs, Risk Mitigation, Financial Security and Facilitation of Financial Inclusion Goals are also available to them.

Keywords: Digital Financial inclusion, Micro Enterprises, Women Entrepreneurs.

1. Introduction

The main intention of the current study is to investigate how digital finance influences reliability and stability of the financial eco-system. Financial institutions, governments, and regulatory bodies are actively promoting digitally channelized financial inclusion. Despite widespread promotional efforts, digital financial inclusion is not advancing as anticipated, largely due to consumer attitudes which serve as significant obstacles to achieving a fully enabled e-commerce system.

The current study attempts to evaluate the effectiveness of different programs and initiatives and discover consumer attitudes which act as barriers hampering digital financial inclusion especially in case of women entrepreneurs involved in micro businesses. The proliferation of e-commerce has led to an increase in the availability of digital financial services for both businesses and individuals. Not for profit institutions are increasingly offering services such as E- payments, credit financing, and insurance at POS terminals, a trend known as E-commerce that enables Financial Inclusion that is digital in nature. The Indian government has consistently prioritized financial inclusion in its economic strategies. Initiatives such as Jan Dhan, Aadhaar-Mobile, and Digital India have revolutionized access to financial services for India's underbanked population, thus reducing income inequality. While e-commerce has successfully generated need for digitally operated financial products and services among microenterprises and individuals at the bottom of the economic pyramid, recent advancements in both the public and private sectors have further propelled further growth in the nations digital financial inclusion.

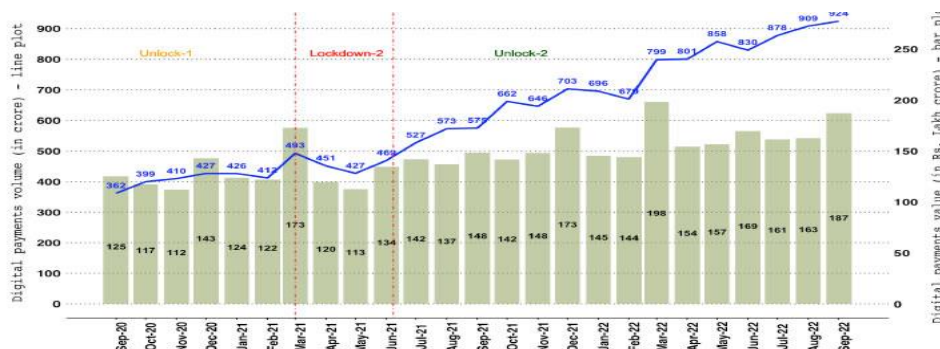
Exploring the digital financial inclusion of women entrepreneurs is a crucial area of study. Despite attempts to foster financial inclusion through digital avenues, there still exists a disparity in the accessibility and utilization of digital financial services among women entrepreneurs. Challenges like insufficient digital literacy, cultural impediments, and unequal technology access impede women's involvement in digital finance. This research seeks to review the echelon of digital financial inclusion among women entrepreneurs, pinpoint the barriers they encounter, and investigate possible remedies to improve their access to and utilization of digital financial services. Addressing these hurdles can advance gender equality in entrepreneurship and bolster overall economic progress.

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1.1 Trends in Digital Payments

Chart 1:Trends In Digital Payment Transaction



(Source:rbi.org.in)⁷

As per Reserve Bank of India estimates there is a regular trend observed in digital payment transaction as can be seen in Chart 1. Digital payments include RTGS, NEFT payments, IMPS, NACH (Credit, debit and APBS), card payment transactions, PPI payment transactions (excl. cash withdrawal), UPI (including BHIM and USSD), BHIM Aadhaar Pay AePs Fund transfer and NETC (linked to bank accounts). There is a gradual increase in digital payment value from Sep 2020 onwards.

1.2 Recent Updates In Indian And Global Markets

1.2.1 Indian Market:

Jan Dhan Yojana: The Indian government's Jan Dhan Yojana scheme continues to make strides in financial inclusion by providing access to banking services for millions of unbanked individuals, particularly women and those in rural areas.

UPI Adoption: The widespread adoption of Unified Payments Interface (UPI) has transformed digital payments in India, enabling easy and instant transactions for individuals and businesses, including women-led micro enterprises.

Fintech Innovation: The Indian fintech sector is witnessing rapid growth, with startups offering innovative solutions for financial inclusion, such as digital lending platforms targeting women entrepreneurs and micro enterprises.

1.2.2 Global Market:

Partnerships and Collaborations: Across the globe, there's a trend of partnerships between financial institutions, technology companies, and NGOs to develop and implement digital financial inclusion initiatives for women and micro entrepreneurs.

Regulatory Support: Many countries are introducing regulatory frameworks to foster digital financial inclusion, promoting innovation while ensuring consumer protection and financial stability.

Impact Investing: Impact investors are increasingly focusing on funding ventures that promote financial inclusion, recognizing the social and economic benefits of empowering marginalized groups, including women and micro entrepreneurs.

2. OBJECTIVES OF THE CURRENT STUDY

1. To study available literature on digital financial inclusion of women micro entrepreneurs.
2. To identify problems encountered by women micro entrepreneurs in the process of digital financial inclusion.
3. To identify benefits of digital financial inclusion in case of women micro entrepreneurs.

3. SCOPE OF THE STUDY

The scope extends to all available literature on digital financial inclusion of women micro entrepreneurs and micro enterprises. Since this study is a literature based analysis only available and recordable literature is used. This study is limited to digital financial inclusion of micro enterprises owned by women. Only problems and benefits resulting out of financial inclusion of women micro entrepreneurs is studied.

4. LITERATURE REVIEW

4.1 Meaning Of Digital Financial Inclusion(DFI):

CGAP (Consultative Group to Assist the Poor) has defined digital financial inclusion as “digital access to and use of formal financial services by excluded and underserved populations. Services should be tailored to meet the specific needs of customers and provided in a responsible manner, with costs being both reasonable for customers and feasible for providers. This includes services such as online payments, mobile banking, digital wallets, and other types of electronic financial transactions. The objective is to increase financial accessibility, encourage economic engagement, and lessen inequality by utilizing digital technologies to offer safe, convenient, and inexpensive financial services to a larger number of people.

4.2 Types of Products That Can Be Read as Digital Financial Products:

There are 7 types of products that are normally used.

1. These are Peer to Peer payment apps
2. Virtual Financial Advisors
3. AI assisted customer support
4. Machine learning
5. Giving Accounts
6. Fintech with Social Media
7. Better Business Features.

4.3 Advantages of Digital Financial Inclusion:

A number of benefits come with DFI, which is stated as making sure that people and businesses have access to appropriate and cost-effective financial products and services that suit their needs. These benefits include decreased poverty, economic growth, resilience building, empowerment, and social inclusion, as

well as better financial health, efficiency, and convenience as well as easier access to social services.

4.4 Review of Empirical Literature

1. This review explores Women's entrepreneurial behavior is greatly encouraged by DFI, which also helps to reduce financial barriers for them and gives them access to business information to help with information gaps. Additionally, as DFI advances, flexibility of women's work increases and they are more likely to become entrepreneurs. This is especially true for vulnerable women, such as those who lack financial freedom or education and live in areas with high levels of gender inequality (Xiaolan Yang et.al., 2022)
2. This review offers a thorough examination of the current research landscape regarding DFI. It encompasses various topics, from the influence of mobile banking to the role of fintech advancements in expanding financial services. Additionally, the review underscores emerging technologies and their potential impact on future trends in digital financial inclusion (Smith & John, 2020)
3. This overview of literature delves into the correlation between DFI and economic growth. Through an examination of both empirical studies and theoretical frameworks, it seeks to comprehend how enhanced access to digital financial services fosters economic development. Furthermore, the review discusses policy implications and offers recommendations for policymakers (Brown & Sarah, 2018)
4. Findings from this literature review suggest a positive connection between financial inclusion and entrepreneurship, particularly encouraging numerous women entrepreneurs to establish their own businesses. By introducing multiple financial access points such as branch offices and ATMs of banks, along with additional financial services facilitating consumer access to credit facilities, financial inclusion can be enhanced (Fareed et al., 2017)
5. This review presents empirical proof regarding the relationship between DFI and socio-economic development in newly developing countries. It consolidates findings from studies conducted in varied contexts, shedding light on how improved access to digital financial services contributes to favorable developmental outcomes (Davis & M, 2020)
6. The study concludes that motivation, networking, socio-cultural, business environment, training and development, and financials have a significant positive influence on the performance of the women entrepreneurs (Jha, P., & Alam, M. M. (2022).
7. Doherty's review synthesizes evidence on the impact of digital financial services (DFS) on women's economic empowerment. He examines various DFS interventions, including mobile money, digital credit, and savings platforms, highlighting their potential to improve financial access, decision-making power, and income generation among women micro entrepreneurs. Doherty, N. (2018)
8. Chakraborty M. (2020) study explores the opportunities and challenges of digital financial inclusion for women entrepreneurs in developing countries. She discusses the role of digital banking, mobile money, and fintech innovations in expanding financial access for women micro entrepreneurs, while also addressing issues related to digital literacy, gender norms, and regulatory barriers.
9. Donner's literature review examines the impact of digital financial services (DFS) on microenterprises, with a focus on the factors influencing their adoption and effectiveness. He synthesizes findings from empirical studies to identify key success factors and challenges in leveraging DFS to support micro entrepreneurship, including issues related to user adoption, usability, and business model sustainability (Donner, J. (2016)

4.5 Challenges of DFI Faced By Women Entrepreneurs Of Small Businesses:

Women micro entrepreneurs face several barriers to financial inclusion, which are outlined in this study. These include laws pertaining to financial instability, limited access to financial services, limited availability of mobile devices, limited financial education and literacy, limited internet access, and limited understanding of digital technologies in financial institutions.

(credolab.com)⁸.

4.6 Progress of DFI In India:

In a country like India one of the most important mechanism for directing long-term finance required for development and higher economic growth is Development Finance Institutions. The development of the Infrastructure concurrently attracts Big investments in other sectors thereby further accelerate growth process. In other words if the country is having improper & poor infrastructure it will lead to high transaction costs, which in turn inhibit realization of high growth potential of the economy. Infrastructure development and growth are closely related to each other which has a direct link with the economy.

From this perspective, it is authoritative to address the issue of financing infrastructure development, as done in the past for financing industrial development by setting up many (DFIs) like IFCI, IDBI, ICICI and more. All these institutions have played an important role in promoting financing not only for industrial development but also sector specific requirements, whether it is power sector in general or rural electrification.

An increasing number of national financial inclusion strategies are now highlighting the need to promote women's financial inclusion.

Nevertheless, according to this recent analysis conducted by WBL and CGAP, there is room for improvement in their efforts to facilitate women entrepreneurs' access to credit and to strengthen the collection and analysis of financial data disaggregated by gender at the national level.

(cgap.org)⁶.

4.7 Women Entrepreneurs:

Ruhani J. Alice- women entrepreneurship involves the engagement of women in the ownership and employment aspects of a business enterprise.

According to Frederick Harbison- any woman or group of women that introduces, pioneers, or adopts an economic activity can be defined as women entrepreneurship.

4.8 Micro Enterprises In India & Their Role:

Micro Enterprises play a vital role in the economic advancement of India by formalizing economic activities and generating employment, thereby significantly contributing to poverty alleviation. It stands as the

Digital Financial Inclusion of Women Micro Entrepreneurs - A Literature Based Approach

second-largest employer in India after agriculture. Compared to large industries, micro enterprises facilitate the development of the nonfarm sector by fostering industrial growth in rural and semi-rural areas. This sector serves as a tool for inclusive growth, empowering the most vulnerable and marginalized groups.

4.9 Rationale and Motivation:

1. **Gender Equality and Empowerment:** Digital financial inclusion is crucial for promoting gender equality and empowering women economically. By providing women with access to financial services, they can participate more fully in the economy, control their finances, and make independent financial decisions.
2. **Poverty Alleviation:** Women and micro entrepreneurs often face barriers to accessing traditional financial services, which can perpetuate cycles of poverty. Digital financial inclusion provides them with opportunities to access credit, save money, and invest in their businesses, thereby contributing to poverty alleviation.
3. **Entrepreneurship and Economic Growth:** Micro enterprises, many of which are led by women, play a significant role in driving economic growth and creating employment opportunities. By supporting digital financial inclusion for micro entrepreneurs, economies can unlock their full potential for innovation and productivity.
4. **Resilience and Risk Mitigation:** Access to financial services can help women and micro entrepreneurs build resilience against financial shocks and mitigate risks associated with entrepreneurship. Savings, insurance, and access to credit can provide a safety net during challenging times, enabling them to sustain and grow their businesses.
5. **Digital Transformation:** In an increasingly digital world, digital financial inclusion is essential for ensuring that women and micro entrepreneurs are not left behind. By leveraging technology, financial services can be delivered more efficiently and cost-effectively, reaching underserved populations in remote areas.
6. **Social Impact and Sustainable Development:** Promoting digital financial inclusion aligns with broader social impact goals and sustainable development objectives. By empowering women and micro entrepreneurs, it contributes to inclusive growth, social cohesion, and the achievement of the UN Sustainable Development Goals.

5. Challenges Of Digital Financial Inclusion Of Women Entrepreneur

Women are 7% less likely than men worldwide to own basic transactional accounts, and the gap widens for the impoverished. Among the difficulties with digital financial inclusion are

- Cultural Barriers
- Unequal Access to Technology
- Financial Constraints and -Gender Bias
- Limited Digital Literacy

- Restricted availability of mobile devices
- Access to the internet, understanding of digital technologies in Financial Institutions are encountered by women micro entrepreneurs.

6. CONCLUSION

Based on existing research, the following findings have been drawn on the degree of digital financial inclusion of female microbusiness owners, the challenges they encounter during the process of digital financial inclusion, and the advantages that result from DFI.

Women entrepreneurs with low incomes and those with limited resources may benefit from the growth of their digital financial inclusion. Encouraging financial inclusion in rural communities might result from better access to basic services. Digital financial inclusion has a lot of promise in a nation like India, where a sizable section of the populace is still unbanked.

By utilizing mobile and digital platforms, financial services can be rendered more easy, inexpensive, and easily accessible. This opens up access to a range of financial services, including savings accounts, loans, insurance, and transactions, for women entrepreneurs who were previously excluded from well-known financial institutions. The projects listed above demonstrate the possibility of narrowing the gap between the population that does not have access to traditional financial services and banks, thereby fostering financial inclusion and improving socioeconomic standing.

To overcome challenges such limited access to mobile devices, internet connectivity, familiarity with digital technology, and trust in digital financial services, action must be taken. In order to preserve users' rights and the stability of the financial system, it is also crucial to implement the proper rules and consumer protection measures.

7. Scope for Further Research:

This study is literature based. It is possible to research the same objectives by using primary data sources. A questionnaire may be prepared to gather data with respect to digital financial inclusion of women entrepreneurs involved in micro businesses.

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A STUDY ON WOMEN ENTREPRENEURS: ACHIEVING SUCCESS AND OVERCOMING CHALLENGES

M. Pallavi ¹ | V. Rajitha ²

Abstract

In the present era, the significance of women's entrepreneurship has risen, contributing significantly to the generation of new employment opportunities and fostering economic and social growth within society. Despite numerous social challenges, Indian women stand out and receive applauded for their achievements in diverse fields. The transformation of social fabric of the Indian society, in terms of increased educational status of women and varied aspirations for better life, has prompted a shift in the lifestyle of women, they've not only competed with men but also successfully stood shoulder with them in various aspects of life, including business. These women leaders exhibit assertiveness, persuasiveness, and a readiness to take risks. Their success in the competitive landscape is attributed to their hard work, diligence and perseverance.

This paper seeks to highlight the significant professional achievements and transformative influence of women across various industries. By examining the challenges they encounter, such as systemic biases and workplace dynamics, this study offers a thorough overview of both the successes and obstacles women face as they navigate and shape the competitive business landscape.

It serves as a valuable resource for those interested in the evolving narrative of women in the business world, showcasing not only their achievements but also challenges, government initiatives for breaking barriers and preconceived notions.

Key words: Women, Entrepreneurship, Business, Challenges, Government schemes.

I. INTRODUCTION TO THE STUDY

In highly populated countries like India, entrepreneurship plays a crucial role in contributing to the economic growth. So, the landscape of entrepreneurship is evolving, with an increasing number of women making their mark as successful business leaders. In today's world, women are coming out from barriers and venturing into the entrepreneurial domain, demonstrating remarkable resilience and acumen. Despite facing unique challenges, women entrepreneurs are carving out their paths to success, contributing significantly to economic growth and innovation.

Women entrepreneurs in India have been instrumental in contributing to the country's economic growth and have demonstrated their ability to excel in various industries while maintaining a work-life balance. The government of India has defined women entrepreneurs as those who initiate, organize, and operate a business enterprise, and their participation is seen as a crucial factor in the economic development of the nation.

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The emergence of women entrepreneurs and their contribution to the Indian economy is significant, with a constant rise in the number of women entrepreneurs since the 1990s. Women-owned businesses have not only generated employment for themselves but have also provided opportunities for others in the organized and unorganized sectors. The expansion of women-owned businesses has been a key indicator of their increasing contribution to employment and revenues in India. The government has recognized the importance of women's entrepreneurship and has implemented various schemes and programs to support and promote women entrepreneurs.

Despite the gender-based barriers and challenges that women entrepreneurs often face, their role in shaping the future of India's economy is undeniable. The increasing participation of women in entrepreneurship is not only driving economic growth but also empowering women and contributing to the overall development of the country. In this article it delves into the various facets of women's entrepreneurship in India, including the opportunities, challenges, government initiatives, and the impact of women entrepreneurs on the economy. It will provide a comprehensive overview of the evolving role of women in entrepreneurship and the measures being taken to support and foster their entrepreneurial endeavors.

II. LITERATURE REVIEWS

Koneru, K. (2017)., endeavors to study the concept of women entrepreneur–Reasons women become entrepreneurs -Reasons for slow progress of women entrepreneurs in India - suggestions for the growth of women entrepreneurs-Schemes for promotion & development of women entrepreneurship in India-Case study of a women entrepreneur of Ludhiana.

Tiwari, N. (2017), evaluate the concept, profile and dynamics of women entrepreneurship in India, so the study aims at analyzing the prevalence of women entrepreneurship in India. he synthesis of review of the literature brought forth the diversified profile of women entrepreneurs in India. Women entrepreneurs are a heterogeneous segment belonging to different age groups and demographic background. They are also confronted with various gender specific and gender-neutral challenges during the course of establishing and operating their ventures. Entrepreneurial activity is quite low in India and is mostly concentrated in states of Tamil Nadu, Kerala, Andhra Pradesh, West Bengal and Maharashtra.

Sunil Kumar & Harold Andrew Patrick (2018) Motivating Factors that influence women entrepreneurs. This paper base on Factors that motivate women to Engage in entrepreneurship and discuss if there is an association between the factors Facilitating women to become entrepreneurs and the opportunity to become entrepreneurs and prime motivators to become entrepreneurs

Pachorkar, S., Kawishwar, S., & Sharda, P. (2020), describes and identifies the study of women as entrepreneurs and empowerment of women in India with a case study of a NGO, Jwala Mahila Samiti, run by the women, for the women, of the women aimed at providing assistance and aids to women. Overall, the objective is to study the threefold: First is it studies the status of women as entrepreneurs. Second is the role of government in the development of women entrepreneurship in India. Lastly, is to study women empowerment and its encouragement among the society

Sharma, V., & Gaur, M. (2020), observed that to sustain within the competitive market, businesses administered by women are mainly hooked into internal resources and their capabilities supported which they struggle to compete with the external environment. He endeavors to study the opportunities and

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challenges of women entrepreneurs. The study aims to analyze the factors that encourage women entrepreneurs.

Saikia, M. (2023), observed that various motivational factors and major challenges, various motivational Programs, factors help to success of women entrepreneurs in India and also effect remove major challenges related with women entrepreneurs in India.

Pushpalatha, M., & Kalluraya, (2024), The purpose of the study is to understand the vigorous women entrepreneurs for fuelling social and economic development. The main aim is also to identify the challenges of women entrepreneurs. Furthermore, the research underscores the gradual advancement of women entrepreneurs, emphasizing the need for encouragement and support from various quarters—families, society, and crucially, the government. Studies emphasized significant links between the willingness to grow and expectations concerning employee well-being, control, independence, workload, and achievement motivation

III. RESEARCH GAP

There is a need for a gendered perspective in understanding and addressing the structural and cultural factors that affect women entrepreneurs, particularly in terms of access to finance, legal infrastructure, and cultural barriers. While some studies provide case studies and depth interviews, there is a need for more in-depth case studies that explore the diverse experiences of women entrepreneurs in India, including the specific challenges they face and the strategies they employ to overcome these challenges. There is a lack of importance of promoting women entrepreneurship for economic growth and social progress

IV. OBJECTIVES OF THE STUDY

1. To know the importance of promoting women entrepreneurship for economic growth and social progress
2. To understand the opportunities and challenges of women entrepreneurs in India.

V. WOMEN IN BUSINESS

India is brimming with talented women who can contribute a huge amount of wealth into country's economy, and empower other along the way. According to the latest research by McKinsey Global Institute, India could add \$770 billion more than 18% to its GDP by 2025, by giving equal work opportunities to women.

Women's participation in the economy is essential for sustainable economic development, gender equality, and poverty alleviation. McKinsey Global Institute (MGI) estimates that India could boost its GDP by USD 0.7 trillion by bringing 68 million more women into India's workforce by 2025. The World Bank reports that India could increase GDP growth by 1.5 percentage points by including 50% of the women in the workforce.

Here is a table showing the state-wise distribution of women entrepreneurs in India (2021):

Table-1: State -wise distribution of women entrepreneurs in India (2021)

State/UT	Total Women Establishments	Percentage of Total Establishments
Andhra Pradesh	84912	10.56
Arunachal Pradesh	6413	0.08
Assam	154158	1.91
Bihar	153610	1.91
Chhattisgarh	77976	0.97
Goa	16656	0.21
Gujarat	528623	6.57
Haryana	124524	1.55
Himachal Pradesh	49173	0.61
Jammu and Kashmir	31292	0.39
Jharkhand	54732	0.68
Karnataka	545806	6.78
Kerala	913917	11.35
Madhya Pradesh	223405	2.77
Maharashtra	664300	8.25
Manipur	88286	1.1
Meghalaya	29530	0.37
Mizoram	15828	0.2
Nagaland	13657	0.17
Puducherry	10169	0.13
Telangana	356486	4.43
Tamil Nadu	1087609	13.51
Andaman and Nicobar Islands	2513	0.03
All India	8050819	100

This table provides the total number of women establishments and the percentage of total establishments for each state and union territory in India

Source: <https://www.statista.com/statistics/1368758/index-of-women-entrepreneurs-worldwide-country/>

VI. IMPORTANCE OF PROMOTING WOMEN ENTREPRENEURSHIP FOR ECONOMIC GROWTH AND SOCIAL PROGRESS

Promoting women entrepreneurship is crucial for both economic growth and social progress. Here are the key reasons highlighting its importance:

1. Economic Growth:

a. Job Creation: Women entrepreneurs create jobs not only for themselves but also for others. By starting and growing businesses, they contribute significantly to reducing unemployment rates and stimulating economic activity.

b. Innovation and Creativity: Diverse perspectives lead to innovation. Women entrepreneurs bring fresh ideas, perspectives, and approaches to business challenges, fostering innovation and creativity within the entrepreneurial landscape.

c. Economic Empowerment: When women are economically empowered through entrepreneurship, they have the means to invest in education, healthcare, and other family needs. This creates a positive cycle, lifting families and, by extension, communities out of poverty.

d. Increased GDP: The growth of women-led businesses contributes to the overall economic output of a nation. A diverse and inclusive economy, with women playing a significant role in entrepreneurship, leads to a higher Gross Domestic Product (GDP).

2. Social Progress:

a. Gender Equality: Promoting women entrepreneurship is a fundamental step toward achieving gender equality. It empowers women to participate actively in the economy, breaking gender stereotypes and promoting equal opportunities for all.

b. Community Development: Women entrepreneurs often invest a significant portion of their profits back into their communities. This investment can take various forms, such as supporting local schools, healthcare facilities, and community infrastructure projects, leading to overall community development.

c. Role Modeling: Successful women entrepreneurs serve as role models for other women and girls. Their achievements inspire others to pursue their entrepreneurial aspirations, challenging societal norms and encouraging more women to enter the business world.

d. Social Welfare: Women-led businesses tend to be more socially responsible. They often prioritize social welfare initiatives, such as supporting charitable causes, environmental conservation, and community development projects, thereby positively impacting society.

e. Health and Education: Women entrepreneurs, when economically empowered, invest in the health and education of their families. This, in turn, leads to healthier and better-educated future generations, breaking the cycle of poverty.

f. Empowerment and Confidence: Entrepreneurship equips women with skills, knowledge, and confidence. It empowers them to make decisions, take risks, and contribute meaningfully to society, enhancing their overall status and well-being.

Promoting women entrepreneurship is not just about empowering women individually; it is about creating a more equitable and prosperous society. By supporting women entrepreneurs, nations can harness the full potential of their population, leading to robust economic growth, social progress, and a brighter future for everyone.

VII. VARIOUS WOMEN ENTREPRENEURS IN DIGITAL ERA

Falguni Nayar is the founder & CEO of Nykaa. She is one of the famous female entrepreneurs in India. After completing her studies at IIM Ahmedabad, she worked as a venture investor and merchant with Kotak Mahindra Group for around 20 years. Falguni resigned from her position at Kotak Mahindra bank to embark on her entrepreneurial journey. She has been facilitated by the "Most powerful business" at Business today and "Women ahead" at Economic times awards. The women-centered online marketplace Nykaa records over 1.5 million orders a month and over 15 million registered users. The total funding for Nykaa is \$148.5M at a valuation of \$14B, while Falguni's estimated net worth is around \$1.1B.

Divya Gokulnath is an Indian entrepreneur and educator who is the co-founder and director of Byju's, an educational technology company founded in 2012 in Bangalore, India. She was born and raised in Bengaluru and completed her schooling at the Frank Anthony Public School. She pursued a Bachelor of Technology degree in Biotechnology from the famous RV College of Engineering. Divya is married to Byju Raveendran, who is the co-founder of Byju's. As of April 2020, Divya lived with eleven other family members, including their young son and then their second child was born near the beginning of 2021. She has received several honors and awards, including Forbes Asia's Power Businesswomen, Fortune India

Most Powerful Women, and Business Today Most Powerful Women in Indian Business. She was appointed as the Federation of Indian Chambers of Commerce & Industry's EdTech Taskforce Chair.

Aditi Gupta is an Indian author, social entrepreneur, and co-founder of Menstrupedia, an initiative working to spread awareness about menstruation. She is an alumnus of the National Institute of Design, Ahmedabad, and has been a menstrual educator for the past 8 years. Aditi has been recognized for her work and has received several honors, including being named in the Forbes India 30 Under 30 list and being featured as one of BBC's 100 influential women of 2015. She has also been a TED speaker and a World Economic Forum Global Shaper. Aditi's work at Menstrupedia has had a significant impact, having educated over 50,000 girls and women about periods, body positivity, and menstrual health, and her educational tools are employed by over 25,500 schools in India. She aspires to create a future where menstruation is not considered a taboo but a welcome change in young girls' lives.

Lijjat Papad is a women's cooperative involved in the production of papad, an Indian traditional snack. It was established in 1959 by seven women in South Mumbai. The cooperative has grown significantly and now has over 43,000 members in 81 branches across 17 Indian states, with a turnover of around Rs 800 crores. Lijjat Papad is known for its unique business model, which focuses on women's empowerment and community ownership. The cooperative is operated by women members, who are referred to as "sisters" within the organization. Lijjat's success is attributed to its emphasis on quality, standardization, and a profit-sharing model. The cooperative has also expanded its product range to include other food and household items. Lijjat Papad's story is a remarkable example of successful women's entrepreneurship and empowerment, and it has had a significant impact on the economic and social well-being of its members.

Indra Nooyi is an Indian-American business executive and former CEO of PepsiCo. She was born on October 28, 1955, in Chennai, India. Nooyi has been a prominent figure in the business world and has consistently ranked among the world's most powerful women. She served as the CEO of PepsiCo from 2006 to 2018 and was instrumental in the company's global growth and strategic expansion. Nooyi is also known for her advocacy of women's empowerment and work-life balance. She has received numerous honors and awards for her contributions to the business world and society. In addition to her professional achievements, Nooyi is also a published author, with her memoir "My Life in Full: Work, Family, and Our Future" offering insights into her life and career.

Divya Ravichandran is the Founder & CEO of Skrap, a sustainability startup that helps businesses implement zero waste solutions. Skrap offers sustainable solutions for businesses, events, and film shoots. The startup aims to champion India's zero-waste movement and build sustainable solutions for various industries. Divya Ravichandran has been recognized for her work in sustainability and has been featured in various publications. She has also been a speaker at events and conferences, sharing her insights on sustainability and zero-waste solutions. Prior to founding Skrap, Divya worked as a software developer and senior software developer at HashTag Technologies

VIII. OPPORTUNITIES AND CHALLENGES

❖ VARIOUS OPPORTUNITIES OR INITIATIVES BY GOVERNMENT FOR WOMEN ENTREPRENEURS IN INDIA

1. **Skill Upgradation Mahila Coir Yojana:** It is an exclusive training programme aimed at the skill development of women artisans engaged in the coir industry. Two months of training in coir spinning is imparted through this programme. The candidates who undergo this training are given a stipend of Rs. 3000/- per month. The trained artisans under the scheme are encouraged to avail assistance through Prime Minister's Employment Generation Programme (PMEGP) scheme to set up coir units.
2. **Mahila Samriddhi Yojana:** It is a Micro Finance scheme for women with a rebate in interest. Financial Assistance up to the cost of Rs. 1,40,000/- is provided. Women belonging to backward classes, as per the government norms, and whose family income is less than Rupees three lakhs per annum.
3. **Women Entrepreneurship Platform (WEP):** This platform is dedicated to building an ecosystem for women across India to realize their entrepreneurial aspirations, and to scale-up innovative initiatives and chalk out sustainable, long-term strategies for their businesses
4. **Mahila Shakti Kendra:** The Mahila Shakti Kendra (MSK) Scheme was approved in November, 2017 as a centrally sponsored scheme to empower rural women through community participation. The scheme is envisaged to provide an interface for rural women to approach the government for availing theory entitlements and for empowering them through training and capacity building.
5. **Annapurna Scheme:** This scheme provides loans to women in the food catering industry for establishing their small-scale businesses.
6. **Stand-up India:** Stand-Up India (SUI) scheme for financing SC/ST and/or Women Entrepreneurs has been launched by Hon'ble Prime Minister (PM) on April 05, 2016. The objective of the SUI scheme is to facilitate bank loans between Rs.10 lakh and Rs.1 Crore to at least one Scheduled Caste (SC) or Scheduled Tribe (ST) borrower and at least one-woman borrower per bank branch for setting up a greenfield enterprise. This enterprise may be in manufacturing, services, Agri-allied activities or the trading sector. In case of non-individual enterprises at least 51% of the shareholding and controlling stake should be held by either an SC/ST or woman entrepreneur.
7. **Nai Roshni- Scheme for leadership development of minority women:** Nai Roshni programme is run with the help of NGOs, Civil societies and Government Institutions all over the country. It includes various training modules like Leadership of women, Educational Programmes, Health and Hygiene, Swachh Bharat, Financial Literacy, Life Skills, Legal Rights of Women, Digital Literacy and Advocacy for Social and behavioural change.

❖ CHALLENGES FACED BY WOMEN ENTREPRENEURS GLOBALLY AND IN INDIA.

Women entrepreneurs in India face a myriad of challenges, often rooted in social, cultural, and economic factors. While the landscape for women entrepreneurs has been improving with various governmental and non-governmental initiatives, several challenges persist:

1. **Societal Norms and Cultural Expectations:** Traditional gender roles and societal expectations can limit women's freedom to make independent choices, including decisions related to entrepreneurship. The prevailing stereotypes often discourage women from pursuing non-traditional careers or starting their own businesses.
2. **Access to Capital:** One of the significant challenges faced by women entrepreneurs is the limited access to capital. Women often encounter difficulties in securing loans and investments due to biases and lack of collateral. Financial institutions may have stringent requirements that disproportionately affect women entrepreneurs.

3. Limited Financial Literacy: Limited financial literacy and awareness about various funding options and financial management can hinder women entrepreneurs from making informed decisions about their businesses. Lack of knowledge about financial planning, taxation, and accessing credit can be barriers to their entrepreneurial endeavors.

4. Family and Work-Life Balance: Balancing family responsibilities with the demands of entrepreneurship can be overwhelming for women entrepreneurs. Traditional gender roles often place the burden of household and care giving duties on women, making it challenging to manage a business effectively.

5. Lack of Networking Opportunities: Women entrepreneurs may face challenges in building professional networks, accessing mentors, and establishing connections in the business community. Limited networking opportunities can hinder their access to valuable resources, collaborations, and partnerships.

6. Market Bias and Stereotyping: Women entrepreneurs can face bias and stereotyping in the marketplace. Clients, investors, and partners might question their abilities or decisions based on gender, leading to unequal treatment and opportunities.

7. Legal and Regulatory Challenges: Despite improvements in the legal framework, women entrepreneurs in India still encounter bureaucratic hurdles and complex regulations when registering and operating businesses. Navigating legal processes can be challenging, especially for those without adequate support and resources.

8. Lack of Mentorship: Access to mentors and role models is crucial for the professional growth of entrepreneurs. Limited availability of female mentors and role models can hinder the personal and business development of women entrepreneurs.

9. Technological Barriers: Limited access to technology, digital skills, and online platforms can restrict women entrepreneurs' ability to reach a broader market, advertise their products or services, and efficiently manage their businesses.

10. Safety Concerns: Safety concerns, especially for women operating businesses in public spaces or during odd hours, can be a significant deterrent. Ensuring personal safety while conducting business activities is a challenge that women entrepreneurs often face.

Efforts are being made by various organizations, both governmental and non-governmental, to address these challenges and create a more supportive environment for women entrepreneurs in India. However, continued awareness, policy reforms, and targeted support are necessary to empower women entrepreneurs and enable them to thrive in the Indian business landscape.

IX. SUGGESTIONS

1. Women in business should be offered soft loans & subsidies for encouraging them into industrial activities. The financial institutions should provide more working capital assistance both for small scale venture and large-scale ventures.
2. Educational institutes should tie up with various government and non-government agencies to assist in entrepreneurship development mainly to plan business projects.
3. An Awareness programme should be conducted on a mass scale with the intention of creating awareness among women about the various areas to conduct business.
4. Women should try to upgrade themselves in the changing times by adapting the latest technology benefits. Women must be educated and trained constantly to acquire the skills

and knowledge in all the functional areas of business management. This can facilitate women to excel in decision making process and develop a good business network.

5. Attempts by various NGO 's and government organizations to spread information about policies, plans and strategies on the development of women in the field of industry, trade and commerce. Women entrepreneurs should utilize the various schemes provided by the Government.

X. CONCLUSION

Efforts are being made to ensure equality of opportunity for women in entrepreneurship, with increasing participation seen in various sectors. Laws guaranteeing equal rights in education, employment, and political processes have been enacted promising a more inclusive society. Current situation is very fast moving with technology development, transformation, industrialization, rural development, education and development. In such situations, employment opportunity enlarged drastically for women. Women entrepreneurs faced lots of problems like lack of education, social barriers, legal formalities, high cost of production, male dominated society, limited managerial ability, lack of self-confidence etc.

The Government should make a plan so that the Indian women entrepreneurs can work more on empowerment by training, development and capacity building programs. It is identical truth that rural women entrepreneurs cannot be developed without suitable training. Therefore, it is necessary to provide training to women to enhance their entrepreneurial skill and giving a route of success to rural women. We can promise ourselves and make a sincere commitment of contributing to the field of women entrepreneurship at individual level which un-doubted bring drastic positive change in growth and development of women entrepreneurship at country and even at a global level.

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AN ANALYSIS OF EARNINGS MANAGEMENT THROUGH WINDOW DRESSING IMPACTING REVENUE RECOGNITION TIMELINE(S) AND QUALITY OF REPORTED EARNINGS

Ashima Negi¹

ABSTRACT:

The background of this research can be very well understood if one is to understand that the Earnings Quality is greatly impacted once the firm plans to evade taxes or deploys differentiated timeline(s) to capture Revenues and hence recognise them as and when to the delight of the Organisational Management and Top Bosses.

This research paper will review and analyse existing data available in public domain as issued by the listed (BSE) organisations, to evaluate their very degree of window dressing of Financial Data and Statement(s). The above targets were met by critical analysis of primary and secondary data collected directly from organisation(s) or through 3rd party platforms of SEBI/NSDL/CDSL.

It can be seen that predictable earnings and stable timeline(s) of Reporting of earnings by the organisations, witnessing reducing distortion of financial data by the firms, in order to less influence its investors and stakeholders, at large.

Keywords: Beneish M Score, EBITDA, EBIT, Montier's C-Score, Earnings Management, Revenue Recognition, Indian Accounting Standards, IFRS..

INTRODUCTION:

Weak internal controls and negligence towards financial misstatement of data, often ignored for a long time, makes the organisational management resolute towards Management of its Earnings.

In order to save the face of the firm, from investors' palm twitching glares and to wards of any technical data mis-representation or pertinent fraud underlying the financial data, the firms often are found to resolve to the option of delayed revenue recognition(s) and thereby recording timely loss recognition (TLR).

Montier's C-Score helps recognize any cooked-book Financial data and statement(s), highlighting discrete score of the firm, ranging between 0-6, for 6 criteria's to detect financial manipulation. More greater the Score, the more is manipulation of financial data.

LITERATURE REVIEW:

According to Prof. Dr. M. Daniel Beneish, a firm which has manipulated its earnings, has done so strategically and conceals the same with due diligence, for which variations in financial ratios can help detect such earnings management, using the Beneish M Score (Katarina Valaskova¹).

Background – James Cheating Score:

The James Montier C-Score is an effective tool to help forensics Accountants recognise and unearth any Data Manipulation taken place in the Financial Quantitative Data of a Firm.

The C-Score or Cheating Score or Cooking-Score, refers to highlight any data manipulation taken place in the financial data, by allotting 0 or 1 score.

Where '0' signifies no data manipulation and '1' suggests data manipulation.

¹ Assistant Professor, Unacademy, Sorting Hat Technologies Pvt.Ltd., Bangalore, Karnataka

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The Score of ‘1’ can help a forensics accountant help identify related ratios of the financial data, and highlight whether the firm cooking their financial books, but self-inflating the like and unlike financial data.

METHODOLOGY :-

The research paper is based on Data from various Financial Statement(s) published in public domain by the organisation(s) itself, towards there corporate respo nsibilities towards stakeholder(s), at large.

The data has been obtained from shareholder(s) and public domain websites hosted by the organisations and market regulator(s) such as SEBI, NSDL.

The Data from QoQ statement(s) are un-audited published financial information of the firm and the data from the YoY statement(s) has been gathered from audited and published financial statement(s) available in the public domain.

Each firm from the sector under study, have been studied individually to know the Montier’s C-Score and the Beneish M Score, to determine any underlying ‘Earnings Management’ or ‘timely loss recognition (TLR)’ for revenue recognition.

DATA :-

The data hails from various sector(s) of Indian Business Domain, such as Petro-chemical, Banks and FMCG sector.

The data gathered is quarter and yearly financial data, so gathered from QoQ and YoY analysis (financial) Statement(s).

Table No.1 - 5 YEARS INOME STATEMENT(S) FOR ORGANISATIONS UNDER STUDY :-

YEARLY RESULTS OF RELIANCE INDUSTRIES (in Rs. Cr.)	MARCH 2023	MARCH 2022	MARCH 2021	MARCH 2020	MARCH 2019
Depreciation	10,131.00	10,276.00	9,199.00	9,728.00	10,558.00
Net Profit/(Loss) For the Period	44,205.00	39,084.00	31,944.00	30,903.00	35,163.00

PROFIT & LOSS ACCOUNT OF BAJAJ AUTO (Rs. Cr.)	MAR 23	MAR 22	MAR 21	MAR 20	MAR 19
DEPRECIATION AND AMORTISATION EXPENSES	282.44	269.17	259.28	246.43	265.69
PROFIT/LOSS FOR THE PERIOD	5,627.60	5,018.87	4,554.59	5,099.98	4,675.18

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PROFIT & LOSS ACCOUNT OF ULTRATECH CEMENT (in Rs. Cr.)	MAR 23	MAR 22	MAR 21	MAR 20	MAR 19
DEPRECIATION AND AMORTISATION EXPENSES	2,619.24	2,456.76	2,434.35	2,454.90	2,321.20
PROFIT/LOSS FOR THE PERIOD	4,916.88	7,066.54	5,342.07	5,455.54	2,412.45
SOURCE :- (1)(HTTPS://FINBOX.COM/NSEI:RELIANCE/FINANCIALS/INCOME STATEMENT) (2)(HTTPS://FINBOX.COM/NSEI:ULTRACEMCO/FINANCIALS/INCOME STATEMENT) (3)(HTTPS://FINBOX.COM/NSEI:BAJAJ-AUTO/EXPLORER/GP/)					

Table No.2 - 5 YEARS BALANCE SHEET(S) FOR ORGANISATIONS UNDER STUDY :-

BALANCE SHEET OF RELIANCE INDUSTRIES (Rs.Cr.)		MARCH 2023	MARCH 2022	MARCH 2021	MARCH 2020	MARCH 2019
TOTAL CURRENT LIABILITIES	237,276	200,982	201,787	330,682	202,021	
TOTAL CURRENT ASSETS	265,932	222,398	210,719	166,654	152,864	
BALANCE SHEET OF BAJAJ AUTO (RS. CR.)		MARCH 2023	MARCH 2022	MARCH 2021	MARCH 2020	MARCH 2019
TOTAL CURRENT LIABILITIES	5,198.04	4,689.44	5,643.21	4,253.21	4,873.68	
TOTAL CURRENT ASSETS	8,870.41	9,994.47	14,175.13	6,596.96	7,062.6	

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BALANCE SHEET OF ULTRATECH CEMENT (Rs. Cr.)	MARCH 2023	MARCH 2022	MARCH 2021	MARCH 2020	MARCH 2019
TOTAL CURRENT LIABILITIES	22,248.12	19,172.59	19,587.76	14,263.30	14,539.59
TOTAL CURRENT ASSETS⁵	21,864.64	18,991.79	22,992.37	14,751.52	12,677.95
SOURCE :- (1)(https://www.moneycontrol.com/financials/relianceindustries/balance-sheetVI/RD) (2) https://finbox.com/NSEI:BAJAJ-AUTO/financials/balance_sheet (3) https://finbox.com/BDL:ULCL1/financials/balance_sheet					

Above data is suggestive of 5 years analysis, to understand any drastic data changes in the financials of the firm.

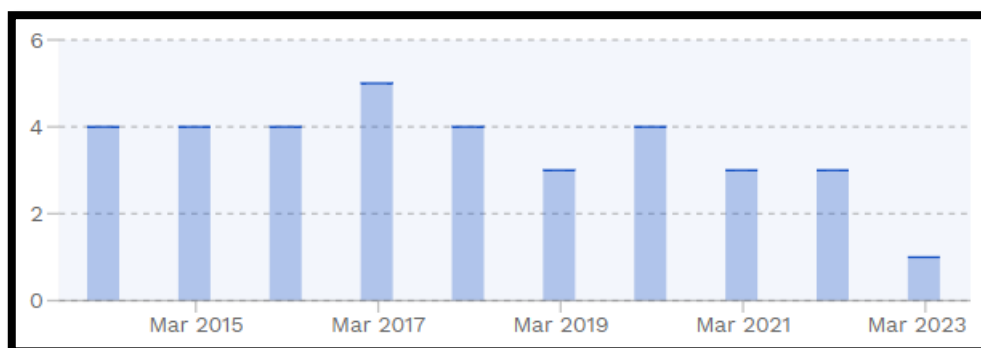
Such as in the case of ULTRATECH Cement, it can be clearly seen, that there is a steep rise in the Total Current Assets of the firm from period ending March,2019 to period ending March, 2023, suggestive of more than 50% jump, calling in for a closer analysis of all the component(s) of the ‘TOTAL CURRENT ASSETS’, in order to unearth any un-justified increase, such as in Trade Receivables.

It is to be noted, that Since TOTAL CURRENT ASSETS are constituent of Short Term Investment(s), Inventory(Raw Material + Finished Goods), Receivables and Cash & Cash Equivalents.

Any surge in Inventory might suggest Tied Up Cash and an Increase in Receivables suggest more of Credit Sales, which might end-up in Bad Debt in future for the firm. An increase in Cash obviously is not a welcome sign, since it suggests more of value tied up in depreciative form, since loose cash is of no good. Hence the above data calls in for further scrutiny.

RESULTS :-

Diagram No. 1 – Montier C Score Of Reliance

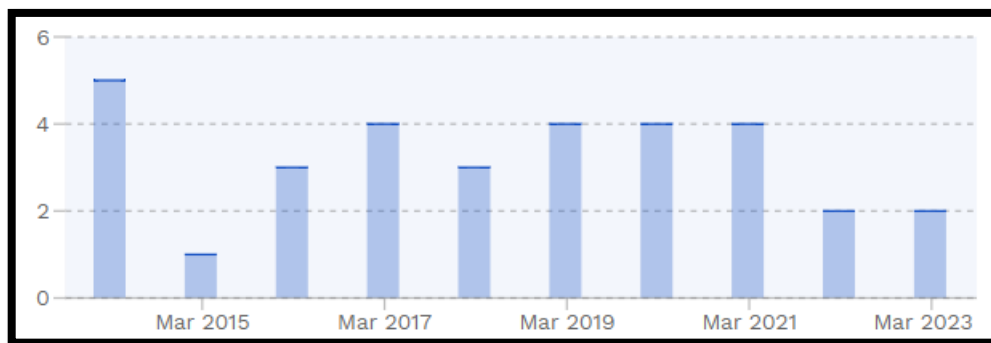


Source : https://finbox.com/NSEI:RELIANCE/explorer/montier_cscore/

FINDINGS FOR Reliance :-

Twelve months James Montier's c-score is 6
 C-score is averaged at 3 for the financial period ending at March 2019 to 2023.
 The median of C-score of 3 for financial years ending March 2019 to 2023.
 For the last 5 years, James Montier's c-score peaked in December 2023 at 6.
 James Montier's c-score hit its 5-year low in March 2023 of 1.
 James Montier's c-score decreased in 2019 (3, -25.0%), 2021 (3, -25.0%), and 2023 (1, -66.7%), increased in 2020 (4, +33.3%), and was flat in 2022 (3)

Diagram No. 2 – Montier C Score Of Bajaj Auto

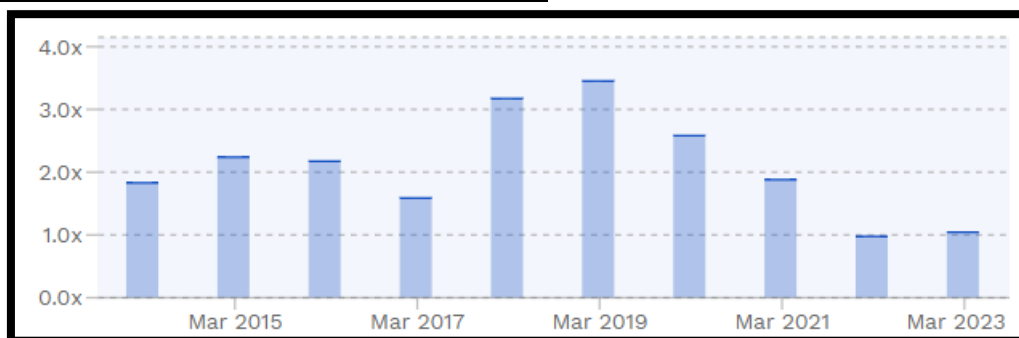


Source : https://finbox.com/NSEI:BAJAJ-AUTO/explorer/montier_cscore/

FINDINGS FOR Bajaj Auto :-

latest twelve months James Montier's c-score is 6
 James Montier's c-score for the financial years ending March 2019 upto 2023 averaged 3.
 James Montier's c-score of 4 for the financial years ending March 2019 to 2023.
 For the previous 5 years James Montier's c-score peaked in December 2023 at 6.
 James Montier's c-score hit its 5-year low in March 2022 of 2
 James Montier's c-score decreased in 2022 (2, -50.0%), increased in 2019 (4, +33.3%), and was flat in 2020 (4), 2021 (4), and 2023 (2).

Diagram No. 3 – Montier C Score Of UltraTech Cement



Source : https://finbox.com/NSEI:ULTRACEMCO/explorer/total_debt_to_ebitda/

An Analysis of Earnings Management Through Window Dressing Impacting Revenue Recognition Timeline(s) and Quality of Reported Earnings

FINDINGS FOR UltraTech Cement :-

The latest 12 months total debt / ebitda stands at 0.9x

Total debt / ebitda for financial period ending March 2019 to period of 2023 averaged 2.0x.

total debt / ebitda of 1.9x from the financial period ending March 2019 to 2023.

Within previous 5 years, the total debt / ebitda peaked in March 2019 at 3.5x.

total debt / ebitda hit its 5-year low in March 2022 of 1.0x.

total debt / ebitda decreased in 2020 (2.6x, -25.2%), 2021 (1.9x, -27.2%), and 2022 (1.0x, -48.0%) and increased in 2019 (3.5x, +8.8%) and 2023 (1.0x, +6.7%).

DISCUSSION :-

The James Montier C-Score was calculated on the data to find whether the financial statements are cook-books and have a cheating-score or C-Score or not, when for given below 6 points the likelihood occurrence increases, '1' point it given suggesting that creative accounting has been done, or else '0' score is allotted suggesting that the organisation has not manipulated the financial data. The '6' key areas of financial manipulation or cheating or creative accounting are :-

1. When there is a Growth in number divergence for both net income and cash flow (1 point). An increase in accruals is suggestive of a higher likelihood of profit manipulation⁴, since cash flows cannot be deceptive but NET INCOME can.
2. If the firm has increasing number of receivable days (1 point). An accelerated revenue recognition has been made to inflate profits. Increased DSO suggests that the firm is more interested in creating Debtor and people mostly buy when firm indulges in Credit Sales, suggesting an increase in future bad debts.
3. Whether or not the organisation has any increase in inventory held days (1 point). Increasing inventory days means that the input costs of inventory have been artificially manipulated. Increased DSI suggests that firm has tied up cash as either Raw material or Semi-finished goods or even unsold Finished goods.
4. Organisation has Increase in other current assets (1 point). Since receivables and inventory are the foremost indicators of strong financial fundamentals, the organisation then might end-up disguising other current assets.
5. That there is a steady decline in depreciation as compared to the relative to gross fixed assets (1 point). Once depreciation expenses on the Income statement are reduced chances are that profits will be spiked to make NET PROFIT more attractive.
6. Whether the organisation has posted a Total asset growth in excess of 10% (1 point). A series of acquisitions is suggestive of distorted profits.

CONCLUSION :-

For calculating Firms' Financial Riskiness, other Metrics which can be studied upon firm data apart from James Montier's C-score, such as :-

- Asset Efficiency – Helpful in measuring cash flows arising out of firm assets, along with Dupont Ratios - Return on Assets, Asset efficiency ratio helps understand whether the asset investment is good or bad for the firms' long term financial health.
- Net Debt / Total Capital Ratio – It measures the net debt to market value of that of the total capital. To help understand the current picture of the liabilities of the firm.
- Capital Expenditures Coverage - Capital asset outlay, with respect to the value generated from such investments. This ratio is used for financial data comparison rather than using the Dupont Ratio of Returns

An Analysis of Earnings Management Through Window Dressing Impacting Revenue Recognition Timeline(s) and Quality of Reported Earnings

on Investments.

- FCF / Net Income – Helps calculate levered free cash flow compared to net income to common, not inclusive of extra items, thereby Suggesting whether the earnings are of good quality or not.

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Diagram No. 2 – Montier C Score Of Bajaj Auto.

Diagram No. 3 – Montier C Score Of Ultratech Cement.

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<u>Jan.24</u>	3. https://finbox.com/NSEI:RELIANCE/explorer/montier_cscore/
<u>Feb.24</u>	4. https://www.valueresearchonline.com/stories/29406/detecting-creative-accounting-in-a-company-s-financial-numbers/#:~:text=of%20financial%20manipulation,-.James%20Montier's%20C%2Dscore,of%20earnings%20manipulation)%20to%206.
<u>Feb.24</u>	5. https://www.moneycontrol.com/financials/relianceindustries/balance-sheetVI/RI

INFLUENCE OF TECHNOLOGY ON WOMEN ENTREPRENEURSHIP

Manaal Fathima¹

INTRODUCTION

Entrepreneurship in the context of records technology is a brand new gateway to expanding entrepreneurship and self-employment in societies. The fashion of net and cellular penetration has almost risen in all international locations of the world, which guarantees new opportunities for growing new agencies. Statistics and conversation are two vital equipment needed for any entrepreneurial interest. Entrepreneurship is the capability and willingness to broaden and manage an enterprise venture. It is an age-old saying that no society can develop without the lively participation of girls in all spheres of life. Poverty discount may be carried out with the total monetary participation of each lady and man. This paper explains how technology is influencing women's entrepreneurship. In recent years women entrepreneurs have received traction and prominence as a way to create jobs and boost productiveness on the global stage. Era isn't just changing the way we paint and talk, absolutely remodeling the manner we suppose and resolving troubles. Era means the thoughts; innovations and jobs that might be generated employing marketers have a global impact.

The objective of the has a look at:

In today's international, era plays a Centre stage within the complete subject. Generation Entrepreneurship is a stylish manner of leadership primarily based on the technique of identifying high ability and choice-making abilities. We speak about ladies' empowerment but even today women face several demanding situations. In the 21st century girls girls-owned corporations make up more than 9 million companies and they employ over 7 million human beings and as of 2015 have generated more than \$ one trillion in sales. Girls face demanding situations attempting to interrupt in certain fields and especially girls have greater difficult time entering into service in STEM (technological know-how, era, Engineering, and Math) fields. The number one objective of the observation is how technology and Social Media influence ladies entrepreneurs and inspire them to venture into entrepreneurship by putting in place their very own commercial enterprise to support themselves to improve their monetary fame.

1. to evaluate how the girls marketers are successfully using the generation to increase the business
2. To take a look at how modern women marketers inclined toward social media

The fabric used for the examination:

Pragmatic evidence from diverse sources is used in this study. Figures obtained from distinct assets are used for the examination.

Assessment of literature:

Girls within the international these days are as identical as men, whether it's miles in faculties, professional schooling, faculties whether it's access to capital or not it's the capacity to move to begin up friendly cities, one not unusual notion among all of us is that era is possibly the satisfactory applicable for similarly impelling ladies marketers in India and additionally globally.

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The impact of technology on our everyday lives has grown exponentially over the past decade. Whether or not it's laptops or cell telephones, technology allows us to link with the arena around us and acts as a portal to good-sized amounts of expertise that can be accessed effectively. However, many new entrepreneurs do now not utilize generation to its full volume to propel themselves to new heights. Through the help of technology, women marketers also can examine a specific skill set and practice the method in their firm.

Without technological development, there could be no monetary development. It is a reality that human progress can not occur without technological innovation and diffusion, it's far not likely that technology impacts all corporations and people equally. The twenty-first century has been identified as the girl's century, as ladies are starting to take prime function in business. In step with the previous Secretary of the United Nations, Kofi Annan (cited inside the Global Centre for Research on Girls (ICRW), 2012:25), There may be no tool for improvement extra effective than the empowerment of girls and endeavours (that help) create clever gender-based totally perceptions about records, conversation, and generation does play crucial roles to speed up developmental dreams Specifically net connectivity and cell telephones are also contributing to girls entrepreneurship. In any enterprise, the key to succeeding is to get repeat clients, the greater the repeat customers, and better the destiny prospect of your business, as is typically universal, the essential requirement for purchasing repeat clients is to have quite an effective customer join approach. Be it providing after-sales offerings, be it taking regular remarks from customers approximately the exceptional of the best and service being offered, or be it telling current customers about new offers, technology can help girls entrepreneurs stay in contact with their clients 24/7. This also guarantees regular growth in the recollect value of the logo, which is critical for all enterprises nowadays.

How do women entrepreneurs the use era correctly to broaden their commercial enterprise? Women entrepreneurs are leveraging the era in several ways to develop and grow their organizations successfully. A few key techniques consist of:

1. online Presence: ladies entrepreneurs are utilizing websites, social media systems, and e-commerce platforms to establish and sell their corporations. They devise professional websites and engaging social media profiles to attain a much wider audience, exhibit their products or services, and interact with customers.
2. E-commerce systems: Many girls marketers are putting online shops on platforms like Shopify, Etsy, or Amazon to promote their merchandise globally. These platforms offer entry to a big customer base and offer gear for coping with stock, processing orders, and monitoring sales.
3. Virtual advertising and marketing: ladies entrepreneurs are harnessing the energy of digital advertising techniques such as search engine optimization (SEO), e-mail advertising, content material advertising, and social media advertising to grow logo consciousness, power website site visitors, and generate leads.
4. remote paintings and Collaboration gear: With the upward push of far-flung work, ladies entrepreneurs are utilizing numerous collaboration equipment along with Zoom, Slack, and Google Workspace to talk with group individuals, collaborate on tasks, and behavior digital meetings with customers and partners.

5. Cloud Computing: Cloud-primarily based tools and services permit girls entrepreneurs to store and access statistics, files, and packages from everywhere with a web connection. They could leverage cloud computing for information backup, report sharing, undertaking management, and greater, enhancing flexibility and performance.
6. E-mastering and talent development: ladies marketers are taking benefit of online publications, webinars, and virtual workshops to accumulate new capabilities, stay up to date on enterprise developments, and increase their knowledge base. Platforms like Coursera, Udemy, and LinkedIn Mastering offer an extensive variety of publications on entrepreneurship, enterprise management, marketing, and generation.
7. financial control gear: women entrepreneurs are the usage of accounting software which includes QuickBooks, clean Books, or Xero to manipulate their price range, tune charges, generate invoices, and screen cash to go with the flow. Those gear streamline economic approaches and offer valuable insights for making informed enterprise selections.
8. statistics Analytics: through leveraging information analytics equipment and platforms, girls marketers can gather and examine valuable insights about customer conduct, market trends, and enterprise overall performance. This facts-driven approach enables them to make strategic decisions, optimize marketing campaigns, and enhance general business efficiency.

Typical, technology serves as an effective enabler for ladies' entrepreneurs, empowering them to conquer obstacles, attain new markets, and gain extra achievement in trendy competitive commercial enterprise panorama digital generation is playing a key function in a more suitable boom in a unique area of work, social, training, commercial enterprise, cultural and other associated regions. There's an optimistic possibility for women-owned organizations in the US and India and check out signs of business self-belief, financing alternatives, motivation, and assets to guide them. There are a few key findings of variations and similarities among ladies entrepreneurs in India and the us Indian female Indian marketers, 98% believe it's miles vital that their organizations have a tremendous social effect. A percentage of us women entrepreneurs cite this opinion. Ladies commenced their companies, whilst preserving their current day jobs suggests ninety percent in India and 68 percent in the US.

Girls entrepreneurs are presented with new opportunities by facts, communication, and generation (ICT) to begin and develop businesses. Via new in addition to traditional varieties of ICTs women marketers are reaching out to customers, turning more green, and constructing their groups in ways they couldn't do before. The range of ability benefits ICTs offer is significant, which includes higher entry to vital records in regions together with enterprise development, market and pricing statistics, production technology, compliance, forecast, and schooling. There may be growing proof that increasingly more women have become interested in small enterprise ownership and in fact, starting in business. In the US 6. 6.4 million self-employed ladies offer employment for nine.2 million humans and create good-sized income. Whilst era is used by women, African girls entrepreneurs wider markets can without problems and effortlessly be accessed.

How are cutting-edge girls entrepreneurs willing towards social media to the benefit of their ventures?

1. price-effective advertising and marketing: Social media platforms provide a value-powerful manner for ladies entrepreneurs to sell their groups. They can create enterprise profiles without cost and utilize natural reach or invest in targeted advertising to reach their audience without spending a fortune on conventional advertising methods.
2. Wider reach: Social media systems have billions of active users worldwide, supplying women entrepreneurs with the opportunity to attain a significant and various target market. Through strategically

the use of hashtags, geotags, and sharing engaging content material, they can make their brand visibility and attract ability customers from one-of-a-kind demographics and places.

3. **building logo attention and Credibility:** Through regular and authentic engagement on social media, ladies marketers can construct logo focus and credibility for his or her ventures. By sharing valuable content, responding to inquiries, and actively participating in relevant conversations, they could establish themselves as enterprise specialists and truthful sources of facts.
4. **Customer engagement and remarks:** Social media platforms enable direct conversation and interplay between girls marketers and their clients. They could interact with their target market in actual time, respond to comments and messages, deal with consumer issues, and gather remarks to enhance their services or products.
5. **marketplace studies and Insights:** Social media platforms provide precious insights into customer possibilities, conduct, and traits. Women marketers can use analytics gear to track engagement metrics, display competitor activities, and conduct market research to better recognize their audience and tailor their advertising and marketing techniques.
6. **Using Internet site visitors and sales:** Social media platforms function as powerful channels for driving site visitors to ladies' entrepreneurs' websites and online shops. By sharing links to their merchandise or weblog posts, jogging promotional campaigns, and imposing call-to-action buttons, they can convert social media followers into website site visitors and ultimately, paying customers.
7. **Networking and Collaboration possibilities:** Social media helps networking and collaboration possibilities for ladies entrepreneurs. They could hook up with like-minded individuals, industry influencers, potential companions, and collaborators to alternate ideas, and percentage assets, and discover at the same time beneficial possibilities for boom and growth.

Conclusion:

Access to Markets and Customers: numerous research have proven that technology allows ladies entrepreneurs to conquer traditional limitations to marketplace entry. E-commerce structures, digital marketing equipment, and social media channels have facilitated direct right of entry to clients, both domestically and globally. Studies using institutions like the World Bank and the Worldwide Labor Agency (ILO) continuously demonstrate that technology-driven market right of entry has been especially beneficial for ladies-owned groups in developing economies, where physical infrastructure and entry to traditional markets can be restricted.

Operational efficiency and value reduction: records analysis from various resources shows that generation adoption contributes to operational efficiency and value reduction for girls entrepreneurs. Cloud-based services, automation equipment, and digital price systems streamline commercial enterprise procedures, reducing overhead charges and enhancing income margins. Research carried out with the aid of corporations together with McKinsey & agency and the Global Entrepreneurship Monitor (GEM) has highlighted how technology-pushed performance profits have a right away advantageous effect on the sustainability and growth of ladies-led ventures.

Talent development and capacity constructing: research findings underscore the role of generation in facilitating talent improvement and ability constructing amongst girls entrepreneurs. Online studying structures, entrepreneurship-centered apps, and virtual education resources offer handy and low-priced avenues for women to accumulate the know-how and talents necessary for business fulfillment. Surveys carried out by using businesses like the Kauffman Foundation and the Worldwide Entrepreneurship Monitor (GEM) constantly show a wonderful correlation between technology-enabled mastering and

Influence of Technology on Women Entrepreneurship

entrepreneurial outcomes, with women entrepreneurs benefiting from more advantageous skills in areas such as financial control, advertising, and marketing, and strategic planning

Networking and Collaboration Opportunities: substantial studies have verified the importance of technology in expanding networking and collaboration possibilities for women entrepreneurs. Digital communities, online forums, and social media structures offer avenues for networking, mentorship, and information sharing, transcending geographic limitations and conventional constraints. Studies using institutions consisting of the countrywide Women's Business Council (NWBC) and the Worldwide Entrepreneurship Screen (GEM) highlight how virtual networking enhances access to precious sources, promotes peer support, and fosters an experience of belonging within the entrepreneurial ecosystem, in the long run contributing to the success and resilience of girls-owned companies.

Innovation and Creativity: Empirical proof shows that the era serves as a catalyst for innovation and creativity amongst ladies marketers. Getting entry to virtual equipment, prototyping systems, and online marketplaces empowers women to expand and commercialize novel products and services. Research conducted through educational institutions and innovation hubs underscores the superb correlation between era adoption and entrepreneurial innovation, with women entrepreneurs leveraging digital systems to disrupt traditional industries, deal with unmet needs, and force social alternate.

Challenges and barriers: despite the evident blessings, research additionally highlights persistent challenges and boundaries that girls marketers face in harnessing the whole ability of generation. Gender disparities in virtual literacy, right of entry to finance for era investment, and systemic biases within the tech quarter continue to inhibit women's participation and success within the digital economy. Studies via groups along with the United Countries and the International Hard Work Company (ILO) underscore the importance of focused interventions, coverage reforms, and inclusive projects to cope with those obstacles and create an enabling environment for girls' entrepreneurship within the digital age.

Pointers:

A lady's entrepreneur is to adapt rapidly to the evolution of social networks because it changes with the instances.

These days entrepreneurs must understand a way to promote & domesticate the nice practices by using technology.

Prepare lady's entrepreneur festival at countrywide & global level.

The government needs to aid girls entrepreneurs that a way to use the technology correctly.

The hour wants to train women to cope and equip them with cyber international to revolutionize monetary empowerment.

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