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EDITORIAL NOTE

Dear Readers,

It is with great pleasure and enthusiasm that we present to you the June 2023 issue of XIBA Business Review, our bi-annual journal committed to exploring the latest trends, insights, and research findings in the dynamic landscape of business and management.

In this edition, we delve into a diverse range of topics, reflecting the multifaceted nature of the contemporary business world. Our featured articles include "A Study on the Role of Emotional Intelligence in Leadership Effectiveness," shedding light on the pivotal role emotions play in effective leadership. Additionally, "A Study on the Impact of Information and Communication Technology Initiatives on Tourism" offers valuable insights into the transformative power of technology in the tourism sector.

"Artificial Intelligence in Asset Pricing: Revolutionizing Financial Markets" explores the profound impact of AI on the financial landscape, while "Effective Recruitment Process and Organizational Performance – An Analysis" provides a critical examination of recruitment strategies and their implications on organizational success. The agricultural sector takes center stage in "The AI Era: The Future of Farming," unravelling the potential of artificial intelligence in revolutionizing agricultural practices. Our journal also includes "A Conceptual Framework for the Study of Employers' Perceptions towards Employability," aiming to contribute to the ongoing discourse on employability. The article "The effectiveness of Artificial Intelligence (AI) in HR practices, specifically within the dynamic IT industries of Chennai" explores the intersection of AI and HR which has become increasingly overall organizational efficiency. This edition also addresses the critical role of Fintech in addressing poverty at the grassroots level, particularly in Micro, Small, and Medium Enterprises (MSMEs).

We extend our heartfelt gratitude to the authors for their valuable contributions and commendable research efforts. Their dedication to advancing knowledge and addressing critical issues in business and management has enriched the scholarly content of this issue.

We hope this edition stimulates thoughtful discussion, encourages further research, and provides a platform for the exchange of ideas within the academic and business communities.

Thank you for your continued support.

Sincerely,

Rev. Dr. A. Michael John SJ

Editor-in-Chief

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Research Articles

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A Study on the Role of Emotional Intelligence in Leadership Effectiveness

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Abstract *Emotional intelligence has become a buzzword in the business world. It is the ability to recognize, understand, and manage our own emotions as well as the emotions of others. In this comprehensive study, we will explore the components of EI, relationship between Emotional Intelligence and Leadership, its profound impact on leadership effectiveness, strategies for developing EI, the benefits of EI in a leadership role, and real-life examples of successful leaders who exemplify high emotional intelligence.*

Finding a good leader is a dream achievement for any organisation. Success of any organisation is based on the leaders at every levels of authority. Many organisations invest a lot of time and money in shaping a good leader. However, with changing times the employees mentality keeps changing, that is a major challenge for any leader in an organisation. The study aims to find the factor behind that distinguishes successful leaders from ordinary people.

This study aims to observe the relationship between leadership and emotional intelligence. Along with, the study analyses the components of EI including self-awareness, self-regulation, motivation, empathy and social skills the major contributing factors towards a leadership efficacy. Furthermore, the study delves in exploring the strategies for development and enhancing emotional intelligence skills for aspiring and current leaders. To illustrate this point, the study emphasizes real-life examples of successful leaders with high emotional intelligence.

Research on emotional intelligence in leadership consistently reveals its positive impact. Leaders with high EI tends to create healthier work environment, improvement in communication and collaboration, increase in employee engagement, strengthening of team effectiveness, leadership effectiveness becomes conspicuous in the organization leading to recognition as well as harmony in the organization.

The study concluded that by practising Emotional Intelligence, leaders and individuals are able to reduce negative emotions, stay cool and manage stress, power to bounce back from adversity, resilient in staying proactive and not reactive and practice empathy and compassion towards other people holding close personal relationship.

Keywords *Emotional Intelligence, Leadership Effectiveness, Successful Leader, Qualities of (Placeholder1) a Leader*

INTRODUCTION

Indeed, the modern world is experiencing a profound and dynamic transformation driven by various factors, including technological advancements, shifting demographics, and evolving socio-economic trends. The emphasis on flexibility, adaptability and a diverse workforce reflects the evolving nature of challenging traditional structures and encouraging innovative approaches to leadership, communication and employee engagement.

In context to leadership, the concept of emotional intelligence has emerged as a crucial factor in understanding what makes a leader truly effective. Emotional intelligence encompasses the ability to recognise, understand and manage one's own emotions while also being attuned to the emotions of others. It has become increasingly evident, that leaders who have high levels of emotional intelligence are better equipped to navigate the complex landscape of interpersonal relationships, foster employee engagement and ultimately drive organisational success.

The objective of this study is to examine the existing knowledge and research findings that shed light on importance of emotional intelligence on leadership effectiveness. Peer reviewed literature insists the components of EI-self-awareness, self-regulation, motivation empathy and social skills and how each factor contributes to the leadership efficacy.

Leaders and organisations encounter a variety of challenges such as change management, engaging employees, managing the talents through recruiting the right persons, rapid technological advancements , making ethical decision and constant pressure of results for leaders which can be stressful and demanding.

Eventually, through a detailed analysis of real-world applications, the paper adds multi-faceted nature of EI

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in leadership. It delves into various leadership styles team dynamics, organisational change and organisational outcomes impacted by leaders. Thereby providing strategies to overcome the challenges and enhancing emotional intelligence skills for aspiring and current leaders. To sum up, integration of EI in leadership development programmes and practises, enhances the leaders providing EI as a success factor in the ever evolving and emotional intelligent landscape of the contemporary workplace.

Leaders in the present world face challenges such as navigating rapid un-certainty, fostering diverse and inclusive environments, addressing the ongoing impact of technological disruptions on business strategies. As leaders, the team expects to provide inspiration, develop employees talents, leading changes, handling different perspectives of work please conflicts. In the Context of competency, making hard decisions, managing resources delegating tasks by entrusting the team.

As individuals, leaders greatest challenge is staying positive in negative environments wanting to be liked, decision fatigue, work-life balance issues and pressure to meet high expectations. Consequences may include burnout, decreased team morale and potential negative impacts on organisational performance. Hence the study explored the strategies successful leaders adopted to overcome the challenges faced by them. Studies have shown that leaders with high emotional intelligence have more effective communication stronger relationships with their teams and better decision-making abilities. Emotional intelligence in leadership can create a positive and productive work environment hence through a detailed analysis of real-world applications, the paper adds multi- faceted nature of EI in leadership. It delves into various leadership styles team dynamics, organisational change and organisational outcomes impacted by leaders EI.

EMOTIONAL INTELLIGENCE

Emotional intelligence (EI) refers to the ability to recognise, understand and manage one's own emotions as well as the emotions of others. A person with high EI can handle situations that require tact and sensitivity with ease and fineness. EI encompasses a range of skills that can be developed and honed. Emotional intelligence was recognised in the 1980s by psychologists Peter Salovey and John Mayer. However it was Daniel Goleman who popularised the term with his book "Emotional intelligence" the concept of EI gained the acceptance overtime and it is now a critical factor in job performance especially for leadership positions. Effective leaders use EI to connect with their team members, understand their needs, and create a positive work culture.

The components of emotional intelligence there are 5 key components of emotional intelligence, which are as:

Self-Awareness

Self-awareness is the ability to recognize and understand one's emotions. It involves being introspective and reflective, and it helps leaders to better understand their own strengths and weaknesses. Leaders who possess self-awareness can manage their emotional responses and can identify their impact on others.

Self-Regulation

Self-regulation is the ability to control one's emotions and behaviour. Leaders with self-regulation can respond to situations in a calm and composed manner, even in high-pressure situations. They are also able to adapt to changing circumstances and demonstrate flexibility in their approach.

Motivation

Motivation is the ability to channel one's emotions toward a goal. Leaders with high motivation can inspire and encourage their team members, even during challenging times. They are also able to maintain a positive attitude and keep their team members motivated.

Empathy

Empathy is the ability to understand and respond to the emotions of others. Leaders who possess empathy can relate to their team members and understand their needs. This helps them to create a positive work environment and foster strong relationships with their team.

Social Skills

Social skills refer to the ability to communicate effectively and build relationships with others. Leaders who possess social skills can inspire trust in their team and leverage their strengths to achieve common goals. They are also able to manage conflicts and provide constructive feedback.

THE IMPORTANCE OF EMOTIONAL INTELLIGENCE IN LEADERSHIP

Effective leaders who possess high EI can inspire and motivate their team members, foster collaboration, establish open communication, and drive innovation. Leaders with low EI, on the other hand, are at risk of creating a negative work culture, which can lead to high turnover rates and decreased productivity.

HOW EMOTIONAL INTELLIGENCE IMPACTS LEADERSHIP EFFECTIVENESS

Leaders with high emotional intelligence are better equipped to handle difficult situations, manage conflicts, and maintain a positive work environment. They are also better at building strong relationships with their team members and creating an environment of open communication. Effective leaders understand the importance of EI and leverage it to drive success.

ATTRIBUTES OF EMOTIONAL INTELLIGENCE IN LEADERSHIP

Self-Awareness

It is the ability to understand one's own emotions, their strengths and weaknesses and it's impact on its performance and relationship. Furthermore, being self-aware makes a leader control their emotion, which helps them understand complex emotions that affect their team members.

Self-awareness has two components. It involves being aware of how others perceive on an individual, second it involves being aware of how others perceive. To evaluate whether an individual is self-aware or not, getting frequent feedback's helps them to understand their emotional quotient level. Adding to it, one should be conscious of his own behaviour to prove that he is self-aware.

Self-Awareness and its Impact in Leadership

Successful leadership often surfaces people who:

- Become aware of critical personal experiences in their life.
- Understand the driving forces.
- Respond by re-thinking about self.
- Redirecting their moves.
- Reshaping their actions.

Stanford rates self-awareness as the pillar on effective leadership and managerial effectiveness. It also suggests that IQ and technical skills are far more less important to leadership success than self-awareness.

Self-Management

Self-management is the second pillar of emotional intelligence.

It is the behaviour or attribute that allows one to control and regulate their responses based on situations and people in order to avoid outburst and rash decisions, it also allows to exhibit a calming behaviour to the colleagues. Let's discuss some reasons on why good leader need excellent self management skills

- No snap judgements.
- Great evaluatory skills.
- Improved leadership.

Self-Management and its Impact in Leadership

Leaders with strong self-management skills can navigate challenging situations and maintain focus, level-headedness, and intention. They are an anchor to their team and a source of positivity and encouragement. Self-Management consists of:

Self-Control

The first step in having emotional self-control is recognising our emotions and how they impact us. They are easy to recognise and share in different cultures, but each person experiences them in a unique way based on their background.

Leaders who want to increase the ethical leadership of the teams must increase their personal self-control. The researchers found when leaders had high self-control that teams perceived them to be more ethical leaders.

Trustworthiness

Trustworthiness refers to the likelihood of undesirable events, which defines people's predisposition to engage in a trusting relationship with a person or object while assuming the perceived risks. Trust, on the other hand, taking risks on the behaviour of the other party based on a positive expectation of reciprocity.

Conscientiousness

Conscientiousness consists of openness, conscientiousness, extraversion, agreeableness, neuroticism that is used in HR to support people decisions. A person scoring high in conscientiousness in a personality test, for example, usually has a high level of self-discipline, they are highly perseverant.

Leaders who are trustworthy and conscientious are reliable and have high ethical standards. They are also prepared to confront those who act unethically, and they are not afraid to make unpopular decisions if they believe it is the right thing to do.

Therefore, self-management is an imperative and inevitable part of a leadership style. It equips a leader with ways to tackle a difficult situation. In addition, it teaches them how to react in a predicament, emphasizing mental peace and a calm attitude.

Social-Awareness

Social Awareness is one of the key components of emotional intelligence. It is a skill that allows us to understand how another person is feeling, empathise with them, and take a different perspective on a situation.

Social Awareness and its Impact on Leadership

Empathy

Empathetic leadership is a style of leadership that focuses on understanding from others point of view. They take a special interest in people around them and find ways to give some solution to their problems by assisting them. They take a special interest in people around them and find ways to give some solution to their problems by assisting them. They Are a type of people who find the root cause of the reason behind their behaviour and and provide ways of solution to come out of that situation. This differentiate them from other leaders and make them successful.

Organisational Awareness

It also refers to a leader's capability to understand and manage the emotions of people acting inside an organization. Communication is one primary element of organizational awareness. Another is the ability to take a systems and process view of the organization. The effective leader is able, on a day-to-day level, to resolve issues by focusing on their causes. Leaders skilled at organizational awareness have a greater sense of the bigger picture.

They see issues in the context of the complex interactions among departments, individuals and competing values in play.

Experts say Someone with strong Organisational Awareness abilities offers multiple perspectives on an idea.

Relationship Management

Relationship management helps in resolving conflicts, influencing, and coaching their team members.

Maintaining peace between all parties of the organization is one of the main functions of a leader.

As the name suggests, relationship management is the art of managing the relations in your life. It essentially means maintaining excellent and positive relationships between the organisation and its clients in a purely business sense. And yet, relationship management goes even further. It envelops maintaining positive relationships with everyone in your life.

THE ROLE OF RELATIONSHIP MANAGEMENT IN LEADERSHIP

Relationships play a crucial role in leadership. Any great leader will use connections to work together and influence others to achieve business goals. Without fostering proper relationships, a leader won't be able to build a shared vision together.

Relationship management is an essential aspect of team building. Without being able to communicate and gain the trust of the team, a leader won't be able to build an effective unit.

Here are some essential relationship management skills that can help leaders:

Assertive Communication

An important aspect of relationship management is assertive communication. It is the ability to communicate and express your thoughts, feelings, and opinions. For a leader to effectively lead their team, assertive communications become indispensable. And often, what separates a good leader from a great one is the ability to get their point across without putting down the other person's feelings and opinions.

Decision-Making

Effective decision-making remains synonymous with both – efficient relationship management, and effective leadership. Incorrect, or haphazardly taken decisions can negatively affect a relationship. Similarly, poor decision-making can lead teams towards disastrous results.

No matter what you try to do, it's difficult to please everyone. And a crucial aspect of decision-making is winning people over when it comes to decisions they don't agree with. Conversely, those good at relationship management can make effective decisions, that translate into outstanding leadership. Thus, effective decision-making and leadership go hand in hand.

Adaptability

A crucial relationship management skill is adaptability. Of course, relationships aren't always smooth sailing. There's

bound to be ups and downs. And that's where adaptability comes into the equation. Being able to adapt to different people and knowing how to get the best out of them, is crucial to effective relationship management.

It's essential for leaders to be able to adapt to different situations and personalities, as well. From external vendors, stakeholders. To the diverse voices within a team – a leader must manage multiple voices. And adaptability is a must have leadership skill.

Problem-Solving

Relationships aren't without their problems, and a vital part of relationship management is problem-solving. Problem-solving requires analytical skills that are also an essential component of leadership.

Influence

The way leaders make decisions can impact employee behaviour. Involving employees in the decision-making process like participative leadership can influence a sense of ownership and responsibility leading to more positive behaviour.

Coach and Mentor

Effective leaders provide regular feedback and keep on identify their strengths and weakness. Constructive feedback helps the employees the area they need to improve.

Recognition for a well-done job can boost the employee morale and encourage positive behaviour and improvement at overall performance in the organisation.

Teamwork

An efficient leaders realise that only with the help of teams, achievement of visions and goals is possible.

HOW TO INCREASE OUR EMOTIONAL INTELLIGENCE AND LEADERSHIP EFFECTIVENESS?

Building our emotional intelligence skills can have a positive impact on our life. In addition to helping become more aware of our own feelings, these skills can help us build stronger relationships and succeed in social situations. To be more empathetic, and to drive higher engagement in the workplace, we shall increase our emotional intelligence quotient. Taking the following actions will help build our emotional intelligence and leadership effectiveness.

- Listening closely and withholding judgement.
- Connection with employees on a personal level.
- Unlocking motivations.
- Seeking to understand more about others and ourself.

How to Improve Self-Awareness

- Goal setting
- Pursuing our passions
- Learning new skills
- Paying attention to our thoughts and emotions
- Positive self-talk
- Meditation
- Practice mindfulness
- Reflecting on our experiences
- Work on building a growth mindset
- Asking for constructive feedback
- Keeping a journal

How to Improve Self-Regulation

- Being mindful on our thoughts and feelings
- Practicing communication skills
- Building distress tolerance skills
- Recognize that we have a choice in how we respond
- Finding ways to manage difficult emotions
- Looking at challenges as opportunities
- Using cognitive reframe to change thought patterns and emotional responses
- Work on accepting your emotions

How to Improve Social Skills

- Showing interest in others
- Noticing other people's social skills
- Practicing good eye contact
- Practicing active listening
- Watching our body language
- Practicing our social skills
- Using icebreakers to help start conversations

How to Build Empathy

- Talk to new people
- Listen to other people
- Be willing to share your feelings
- Try to imagine yourself in someone else's place
- Practice loving-kindness meditation
- Engage in a cause, such as a community project

How to Improve Motivation

- Introducing challenges to keep things interesting
- Focusing on setting small, measurable goals
- Setting goals to help build intrinsic motivation
- By Avoiding overuse of extrinsic rewards
- Celebrating the results

Even if we have high emotional intelligence and leadership effectiveness, it's not easy to get to know every employee below the surface. It's challenging to see the world as others see it and to accept a variety of perspectives in a non-judgmental way.

The effectiveness of a leader is based on how profoundly they understand themselves their knowledge on how others perceive them, and their talents on navigating results in interactions. Psychology today suggested some of the advantages of practising emotional intelligence from:

- The ability to reduce negative emotions.
- The ability to stay cool and manage stress.
- The ability to be assertive and express difficult emotions when necessary.
- The ability to bounce back from adversity.
- The ability to remain proactive, without reacting in the face of a difficult person.
- The ability of expressing intimate emotions with close, personal relationship.

SUCCESS STORIES

Leaders with high EI make thoughtful decisions considering the emotions and needs of their team members, leading to better outcomes. History is replete with examples of leaders whose interpersonal and intrapersonal skills best served their companies, their cause or their countries. Let's discuss about few examples of efficient leaders who adopted the traits of emotional intelligence:

Howard Schultz of Starbucks - Away from Starbucks for eight years, Schultz says that the main reason he came back was 'love' for the company and its people; Starbucks is noted for its general health care benefits, a philosophy inspired by Schultz's father losing his health insurance when Schultz was a child.

Indra Nooyi of Pepsico - With a philosophy of performance with purpose Nooyi has held more employees from a day job to living a calling. She's known for singing in the hallways or walking barefoot in the office

Princess Diana evinces the apex of emotional intelligence in our modern era. Nobody would have faulted her for slipping into the comfort of royalty. Instead she reached to HIV and AIDS patients. More than comfort, she provided a much needed spotlight. Some celebrities with high EQ can be the conscience of the country.

Abraham Lincoln-Arguably the epitome of the emotionally intelligent President of the United States, Lincoln pressed on with monumental changes using his own internal compass, even when all advisers pointed in other directions.

CONCLUSIONS

As seen above, Emotional intelligence is not just a desirable trait, but a critical skill for effective leadership. By understanding and managing emotions, leaders can influence and inspire others, create harmonious work environments, and drive exceptional results. Emotional intelligence (EI) helps leaders to interrogate complex interpersonal dynamic characters in people and fostering employee engagement by creating a good working environment. It is very likely to add to the leadership qualities charisma/inspirational and individual consideration.

As individuals, leaders greatest challenge is staying positive in negative environments, wanting to be liked, decision fatigue, work-life balance issues and pressure to meet high expectations. Consequences may include burnout, decreased team morale and potential negative impacts on organisational performance. Based on this purely secondary research one can conclude that component factors of Emotional Intelligence which proved to be the success factor in Efficient leadership assists individual and leaders to handle any situation in appositive mindset. Effective leaders understand the essence of EI and leverage it to drive success. The study recognised that, Self-awareness in leaders helped them to become aware of critical personal experience in their life, understand and respond by re-thinking, redirecting, and reshaping their actions. Experts believe that Leaders with strong self-management skills (i.e.) self-control, trustworthiness, consciousness, adaptability, achievement, orientation, and initiative traits, navigate challenging situations and maintain focus, level-headedness and intention; Researchers observed that empathetic leaders took a genuine interest in the people around them- what inspires them and what the way they feel. These leaders are effective and influential because they understand human behaviour and cognition. They also add that someone with strong organisational awareness abilities offers multiple perspectives on an idea. The study insisted the importance of relationship management a factor of EI, as it plays an active role in resolving conflicts and miscommunication at a bare minimum, maintaining peace between all parties -one of the main functions of a successful leader. In relevance to the previous literatures, the paper suggested few tips to build emotional intelligence, such as setting goals to pursue one's passions, practicing mindfulness and work towards growth mindset. Practising communication skills and learning to manage difficult

situations, observing other's social skills, and enhancing our body language helps one to stay proactive, not reactive in the face of a difficult situation. Practising loving-kindness and trying to imagine oneself in someone's place helps to become an empathetic leader having the ability to express intimate emotions in close, personal relationship with the team members.

While it's true that steely determination and even greed often drive performance and profits, it's an approach that no longer fits in most modern workplaces. Emotional intelligence characterizes the most successful and human organizations. The success stories of business leaders adopted Emotional Intelligence as their advantage, earning respect within their companies and expanding their business. It also states that an effective leader must be able to set a context where people can excel — this requires balancing organizational and individual needs, strategy and operations. Great leaders have a remarkable mix of vision and practical skill; they have unique insight, but perhaps even more important, the ability to be flexible based on changing circumstances will likely result in improvement in communication and collaboration, increase in employee engagement, strengthening of team effectiveness, leadership effectiveness becomes conspicuous in the organization leading to recognition.

What differentiates executives apart is a level of disciplined self-awareness and persistence in practising emotional intelligence factors help them develop as leaders knowing how to put together a complementary team around them. Though most of the leaders are aware of achieving EI is the only one key to success in any business, it is become a dream as they forego in practising it daily. Persistence and resilience in practising EI help them reach, great heights.

Hence integration of EI in leadership development programmes and practises, enhances the leaders, providing EI as a success factor in the ever evolving and emotional intelligent landscape of the contemporary workplace.

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A Study on the Impact of Information and Communication Technology Initiatives on Tourism

Aburaj B.*, S. John Mano Raj**

Abstract *Tourism plays an important role in earning foreign exchange for our country. Kerala is the first Indian State to declare tourism as an industry. Tourism plays an important role in earning foreign exchange for our country. Kerala is the first Indian State to declare tourism as an industry. Information and Communication Technology (ICT) has become a major driver of the tourism sector. This study focuses on the development of a survey instrument to know the ICT initiatives taken by the Kerala tourism department and to know the impact of various factors Information Quality (IQ), Ease of Use (EU), Facilitating Conditions (FC), on the ICT Initiatives (II) taken by the Kerala tourism department. Data for the study was collected from 400 domestic and international tourists who visited Kerala. The result indicates that there is a positive impact of ICT initiatives on information quality, ease of use, and facilitating conditions.*

Keywords *Information and Communication Technology (ICT), Tourism, ICT and Tourism*

INTRODUCTION

Tourism plays an important role in earning foreign exchange for our country. In 2021, India received 677.63 million domestic tourists visit, 1.05 million foreign tourist visitors, and the Foreign Exchange Earnings (FEE) from tourism was US $ 8.79 billion (ITS, 2022). The tourism industry's contribution to the Gross Domestic Product (GDP) was US $ 178 billion in the year 2021 (IBEF, 2023). Kerala is the first Indian State to declare tourism as an industry, and the State's tourism model is one of the most liberalised models with the private sector leading tourism development (CPPR, 2018). Income from Kerala's tourism industry contributes to 12 per cent of Kerala's GDP (The Hindu, 2022).

REVIEW OF LITERATURE

The implementation of technology has become an important part of the businesses in the era of globalisation (Ali & Frew, 2013). The drivers for using the internet are reliability convenience, satisfactory experience, and consistency of available information (Ansari, Jain & Kaur, 2017). Technology and Information and Communication Technology (ICT) are prominent because of the wide range of prospects they offer to navigate tourists (Gossling, 2021). Future tourism may offer complex choices, customised experiences, compatible connections, and opportunities, and also highlights possible ways in which tourist site and attraction managers might be able to use new technologies (Hughes & Moscardo, 2019).

It is necessary to engage the tourism stakeholders through marketing and social media activities along with providing technical assistance to use the ICT facilities (Joseph, 2020). Tourism stakeholders should take advantage of digital marketing, mobile applications, online platforms, and e-commerce for marketing tourism (Khare & Sathe, 2021). Social media plays a major role in online marketing and tourists decision-making (Law, Buhalis & Cobanoglu, 2014). ICT can be used as a tool, a powerful instrument for monitoring, forecasting, location identification, online payments, information gathering, and management in the tourism industry (Mahajan et al., 2011).

OBJECTIVES

The specific objectives of this study are as follows:

- To develop a questionnaire to study the ICT initiatives taken by the Kerala tourism department.
- To study the impact of various factors information quality, ease of use, and facilitating conditions on the ICT initiatives taken by the Kerala tourism department.

METHODOLOGY

Sample

The data for this study was collected from domestic and international tourists who visited Kerala through the questionnaire. A total of 400 tourists are selected on the

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basis of both quota and purposive sampling methods. Out of 400 tourists, 372 (93 per cent) are domestic tourists and 28 (7 per cent) are international tourists. The quota per cent 93 and 7 was decided based on the number of average domestic (1,35,22,340) and international (10,25,508) tourists who visited Kerala during the years 2014 and 2018.

Table 1: Population and Sample Size

Year	Domestic Tourist	International Tourist	Total
2014	1,16,95,411	9,23,366	1,26,18,777
2015	1,24,65,571	9,77,479	1,34,43,050
2016	1,31,72,535	10,38,419	1,42,10,954
2017	1,46,73,520	10,91,870	1,57,65,390
2018	1,56,04,661	10,96,407	1,67,01,068
Average	1,35,22,340	10,25,508	1,45,47,848
Quota Per cent	93	7	100
Sample Size	372	28	400

Source: Kerala Tourism Statistics 2018.

Questionnaire Development

The survey instrument used to collect data from the tourists was a structured questionnaire. The questionnaire was developed by adapting the dimensions from two studies (Davis, 1989) and (Thompson, Higgins & Howell, 1991). The five dimensions covered in the instrument are (a) services offered, (b) informational quality, (c) ICT initiatives, (d) ease of use (Davis, 1989), and (e) facilitating conditions (Thompson, Higgins & Howell, 1991).

Table 2: Dimensions Adapted

Dimension	Adapted From
Perceived Ease of Use	Davis (1989)
Facilitating Conditions	Thompson, Higgins & Howell (1991)

Reliability

The reliability of a measuring instrument indicates the extent to which the instrument is without bias and ensures stability and consistency. The stability of the research instrument is the ability to produce the same results at two points of time of the study. "A satisfactory level of reliability depends on how a measure is being used. In the early stages of predictive or construct validation research, time and energy can be saved using instruments that have only modest reliability, e.g., .70" (Nunnally & Bernstein, 1994, pp. 264-265).

Table 3: Reliability

Dimension	Cronbach's Alpha
Services Offered (SO)	.89
Information Quality (IQ)	.93
ICT Initiatives (II)	.93
Ease of Use (EU)	.94
Facilitating Conditions (FC)	.90

The Cronbach's alpha values for all the five dimensions of ICT initiatives perceived by the tourists are more than .70. The overall scale reliability was $\alpha = .97$ with a 95% confidence interval. The reliability analysis shows the statements used to measure the ICT initiatives perceived by the tourists, information quality, ICT initiatives, ease of use, and facilitating conditions are reliable. Hence the questionnaire used for the research is stable and consistent.

Validity

Validity refers to the accuracy of a measure or the extent to which a score truthfully represents a concept (Zikmund et al., 2010). Construct validity provides confidence that the sample measures represent the actual score that exists in the population (Hair et al., 2010). Construct validity is assessed through convergent and discriminant validity (Sekaran, 2009).

Table 4: Construct Validity

Construct	Average Variance Extracted	Construct Reliability
Services Offered (SO)	.62	.89
Information Quality (IQ)	.77	.93
ICT Initiatives (II)	.71	.93
Ease of Use (EU)	.74	.95
Facilitating Conditions (FC)	.76	.91

The convergent validity is estimated with the help of Average Variance Extracted (AVE) and Construct Reliability (CR). An AVE of .5 or higher suggests adequate convergence and the CR of .7 or higher suggests good reliability (Hair et al., 2010). High construct reliability indicates that the measures consistently represent the same latent construct.

Table 5: Discriminant Validity

Construct	SO	IQ	II	EU	FC
SO	**.62**				
IQ	.59	**.77**			
II	.57	.56	**.71**		
EU	.48	.52	.55	**.74**	
FC	.49	.65	.57	.50	**.76**

Note: Diagonal values (bold) are the Average Variance Extracted (AVE). Off-diagonal values are the squared correlation estimates among constructs.

Table 5 indicates that all the AVE values of each construct are greater than the squared correlation estimates among constructs. Therefore, the discriminant validity of all the constructs is established.

RESULTS AND DISCUSSION

Demographic Characteristics of the Tourists

The questionnaire was administered to 400 tourists 62.5 per cent of the tourists are in the age group of 20-34 years of age, and 33 per cent belongs to the age group 35-49 years of age. Of the tourists 54.2 per cent are female and 45.8 per cent are male. Regarding marital status, 54.5 per cent are married and 45.5 per cent are single. 93 per cent of the surveyed tourists are domestic and 7 per cent are international. Furthermore, the tourist's length of stay in Kera represents 43.3 per cent for up to 3 days, 36 per cent for seven days and more and 20.7 per cent for 4-6 days.

Table 6: Demographic Characteristics of the Tourists

Demographic Characteristics	n	%
Age		
20 - 34 years	250	62.5
35 - 49 years	132	33.0
50 - 64 years	17	4.3
65 years and over	1	.2
Gender		
Male	183	45.8
Female	217	54.2
Marital Status		
Single	182	45.5
Married	218	54.5
Type of Tourist		
Domestic	372	93.0
International	28	7.0
Length of Stay		
Up to 3 days	173	43.3
4 - 6 days	83	20.7
7 days and more	144	36.0

Note. n = 400.

Correlation between the Dimensions

Table 7 shows the correlation between the dimensions Services Offered (SO), Information Quality (IQ), ICT Initiatives (II), Ease of Use (EU), and Facilitating Conditions (FC).

Table 7: Correlation between the Dimensions

Dimension	1	2	3	4	5
1. SO	–				
2. IQ	.72**				
3. II	.70**	.70**			
4. EU	.65**	.66**	.70**		
5. FC	.64**	.74**	.70**	.65**	–

**p < .01.

The Pearson correlation between the dimensions used in the research is significant p < .01. There exists a positive correlation between the dimensions. The correlation coefficient between the Information Quality (IQ) and Facilitating Conditions (FC) is r = .74 which indicates a 55 per cent positive relationship.

Further, the correlation between Information Quality (IQ) and Services Offered (SO) is r = .72 which exhibits a 52 per cent positive relationship. Information quality and service offered are in a positive relationship. Information Quality, operating in real-time situations, influence facilitating conditions and better-facilitating conditions can offer better services.

Impact of Various Factors on the ICT Initiatives

The impact of various factors Information Quality (IQ), Ease of Use (EU), and Facilitating Conditions (FC) on the ICT Initiatives (II) taken by the Kerala tourism department was studied using the regression model. The results of the regression model are presented in Tables 9 and 10.

In order to test the multicollinearity between the factors, tolerance statistics and Variance Inflation Factor (VIF) is used. Multicollinearity refers to the correlation among three

or more independent variables which decreases the ability to predict the dependent variable. A tolerance statistic of less than 0.20 and VIF of more than 5 is the indicator of multicollinearity problem (Menard, 1995). The results of the collinearity diagnostics are shown in Table 8.

Table 8: Collinearity Diagnostics of Impact of IQ, EU, FC on II

Variable	Collinearity Statistics	
	Tolerance	VIF
IQ	0.39	2.59
EU	0.49	2.03
FC	0.41	2.46

Table 8 shows that for the regression model, all the tolerance statistics are above 0.20 and VIF values are below 10. Therefore, it is concluded that there is no multicollinearity problem between the factors.

$H_0$1: There is no impact of information quality, ease of use, and facilitating conditions on ICT initiatives.

Table 9: Regression Model Summary of Impact of IQ, EU, FC on II

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	p
.79[a]	.62	.62	.53	217.57	<.001

a. Predictors: (Constant), FC, EU, IQ

The R square value in Table 9 indicates that the model accounts for 62 per cent of the variance in the ICT initiatives taken by the Kerala tourism department $F(3,396) = 217.57$, $p < .001$.

Table 10: Regression Coefficients of Impact of IQ, EU, FC on II

Variable	B	SE B	β	t	p
Constant	.86	.11		7.92	<.001
IQ	.23	.04	.26	5.20	<.001
EU	.31	.04	.34	7.79	<.001
FC	.25	.04	.28	5.88	<.001

Dependent Variable: II.

The regression coefficients (b) indicate that as IQ increases by one unit, the ICT initiatives impacted by .86. The standardized coefficients for the Information Quality (IQ) $\beta = .26$, $p < .001$, Ease of Use (EU) $\beta = .34$, $p < .001$, Facilitating Conditions (FC) $\beta = .28$, $p < .001$ shows the impact of these factors on the ICT Initiatives (II) taken by the Kerala tourism department. It is inferred from the standardized coefficients (β) that EU (.34) is highly impacting the ICT initiatives of the Kerala tourism department followed by FC (.28). Further, the results confirm that there is a positive impact on ICT Initiatives (II) with Information Quality (IQ), Ease of Use (EU), and Facilitating Conditions (FC). Thus, the results of the regression reject Hypothesis $H_0$1.

For quite a long time many forms of Digital Support systems (DSS) are being used by various businesses and other organisations. It usually assists the management in decision-making. But in recent years the use of DSS is extended to customer needs. Besides the management digital support mechanisms are aiding the tourists in planning and decision-making. The Technology Acceptance Model (TAM) derived by (Davis, 1989) from the theory of reasoned action, is applied in many information systems. The theory of reasoned action explains the relationship between the attitude and behaviour of human beings when they are in action. Attitude and subjective norms will lead to the behavioural intention that eventually constitutes behaviour, Behavioural Intention (BI) lead to the use of technology. Davis (1989) defines perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort". From a tourism point of view, it can be adapted as facilitating conditions strengthened and sophisticated by many factors including information quality ensuring ease of use.

CONCLUSION

In conclusion, first, the study showed the development of a survey instrument to measure the ICT initiatives taken by the Kerala tourism department. The reliability and validity of the instrument were also established. The second objective, the impact of various factors information quality, ease of use, and facilitating conditions on the ICT initiatives taken by the Kerala tourism department was proved with the help of multiple liner regression model.

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Artificial Intelligence in Asset Pricing: Revolutionizing Financial Markets

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Abstract *This article explores the application of Artificial Intelligence (AI) in asset pricing, highlighting its potential to revolutionize the way financial markets operate. AI-based techniques, such as machine learning and deep learning, have the ability to process vast amounts of data, identify patterns, and generate predictive models for asset pricing. The article discusses key concepts, challenges, and practical applications of AI in asset pricing, including risk assessment, return prediction, portfolio optimization, and market efficiency. Furthermore, it examines the implications of AI adoption for investors, financial institutions, and regulators, emphasizing the need for responsible and ethical use of AI in the finance industry.*

Keywords *Artificial Intelligence, Asset Pricing, Machine Learning, Deep Learning, Predictive Models, Risk Assessment, Return Prediction, Portfolio Optimization, Market Efficiency*

INTRODUCTION

Artificial intelligence (AI) has emerged as a transformative technology across various industries, and the realm of asset pricing is no exception. The integration of AI into financial markets has revolutionized traditional approaches to asset valuation, risk assessment, and investment decision-making. By harnessing the power of advanced algorithms, machine learning, and big data analytics, AI has the potential to unlock new insights, improve forecasting accuracy, and enhance overall market efficiency.

The conventional methods of asset pricing, such as the Capital Asset Pricing Model (CAPM) and the Arbitrage Pricing Theory (APT), have long been the bedrock of financial analysis. However, they often rely on simplified assumptions and struggle to capture the complexities and nuances of real-world market dynamics. This limitation has led to a growing interest in leveraging AI techniques to augment traditional models and offer more robust pricing frameworks.

AI brings a data-driven and adaptive approach to asset pricing, allowing for the analysis of vast amounts of structured and unstructured data, including financial statements, market news, social media sentiment, and alternative data sources. By processing and learning from this rich information landscape, AI algorithms can uncover hidden patterns, identify non-linear relationships, and generate more accurate predictions of asset prices and returns.

Moreover, AI can dynamically adapt to changing market conditions and incorporate real-time information, enabling faster and more responsive decision-making. This agility is particularly valuable in today's fast-paced and interconnected financial markets, where market participants strive to gain a competitive edge by swiftly processing and acting upon new information.

The applications of AI in asset pricing are diverse and encompass various areas. For instance, AI-driven models can improve stock valuation by incorporating a broader range of fundamental, macroeconomic, and sentiment factors. They can also enhance risk management by providing more accurate assessments of portfolio risk and the potential impact of market shocks. Additionally, AI algorithms can aid in the identification of market inefficiencies and the development of algorithmic trading strategies that exploit price discrepancies.

Despite the immense potential of AI in asset pricing, its adoption also raises important considerations and challenges. Ethical concerns, data privacy, algorithmic bias, and the interpretability of AI models are among the critical areas that require careful attention. Balancing innovation with regulatory compliance and ensuring transparency in AI-driven decision-making processes are essential for maintaining trust and integrity in financial markets.

This article explores the exciting landscape of AI in asset pricing, delving into the key concepts, methodologies, applications, and challenges associated with its implementation. By examining real-world examples and insights from academic research and industry practices, we aim to provide a comprehensive overview of how AI is transforming the way financial markets value assets. The potential benefits and risks of AI in asset pricing will be discussed, as well as the implications for investors, financial institutions, and regulators.

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As AI continues to advance and reshape the financial industry, understanding its role in asset pricing becomes crucial for market participants seeking to adapt, innovate, and make informed decisions in an increasingly data-driven and technology-enabled environment.

OVERVIEW OF ASSET PRICING

Asset pricing refers to the process of determining the appropriate value or price of financial assets, such as stocks, bonds, derivatives, and other investment instruments. It is a fundamental aspect of financial markets as it helps investors make informed decisions about buying, selling, or holding assets. Asset pricing provides a framework for understanding the relationship between risk and return, enabling market participants to assess the attractiveness of different investment opportunities.

Traditional asset pricing models and methodologies are based on the assumption that financial markets are efficient and that asset prices reflect all available information. These models aim to capture the relationship between an asset's expected return and its risk, considering factors such as market risk, interest rates, dividends, and company-specific variables. Some of the well-known traditional asset pricing models include the Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT), and the Fama-French Three-Factor Model.

The Capital Asset Pricing Model (CAPM) is a widely used framework that links an asset's expected return to its beta, which measures the asset's sensitivity to market movements. CAPM assumes that the risk premium of an asset is solely determined by its exposure to market risk. The model provides insights into the trade-off between risk and expected return and serves as a benchmark for pricing assets.

The Arbitrage Pricing Theory (APT) is another asset pricing model that takes a multi-factor approach. APT suggests that an asset's return is influenced by multiple risk factors, such as interest rates, inflation, exchange rates, and macroeconomic variables. It assumes that the relationship between an asset's expected return and these factors can be captured through linear regression analysis.

The Fama-French Three-Factor Model expands upon the CAPM and considers additional factors to explain asset returns. It incorporates size (market capitalization) and value (book-to-market ratio) as additional risk factors, in addition to market risk. The model suggests that stocks of smaller companies and stocks with higher book-to-market ratios tend to provide higher returns.

While traditional asset pricing models have provided valuable insights into the relationship between risk and return, they have certain limitations and face challenges in capturing all aspects of market dynamics. Some of the limitations include:

- *Market Inefficiencies:* Traditional models assume that financial markets are perfectly efficient, meaning that asset prices reflect all available information. However, in reality, market inefficiencies, such as informational asymmetry or behavioral biases, can lead to mispricing and deviations from theoretical models.
- *Limited Factors:* Traditional models often rely on a limited number of factors to explain asset returns. This can overlook other important variables that may impact asset pricing, such as investor sentiment, liquidity, or changes in market conditions.
- *Data Assumptions:* Conventional asset pricing models often assume that historical data accurately represents future market dynamics. However, financial markets are subject to evolving economic conditions, regulatory changes, and technological advancements, making it challenging to rely solely on historical data for accurate pricing.
- *Assumptions of Rationality:* Traditional models assume that investors are rational and make decisions based on expected utility maximization. However, in practice, investors' decisions are influenced by emotions, biases, and imperfect information, which may lead to deviations from rational behavior.
- *Risk Measures:* Traditional models often rely on simplified measures of risk, such as beta, to capture asset risk. However, these measures may not fully capture the complex nature of risk, including tail events, extreme volatility, or systemic risk.

Addressing these limitations and challenges has led to the exploration and adoption of alternative approaches, including the use of artificial intelligence (AI) and machine learning (ML) techniques in asset pricing. AI-based models have the potential to enhance pricing accuracy by incorporating a broader range of variables, capturing complex relationships, and adapting to changing market dynamics.

AI TECHNIQUES IN ASSET PRICING

This section delves into the various prominent AI techniques and its significance in asset pricing, including machine learning and deep learning. It explores how these techniques are employed to analyze historical data, identify patterns, and develop predictive models for asset prices.

- *Machine Learning:* Machine learning algorithms, such as neural networks, decision trees, random forests, and support vector machines, are applied to analyze historical financial data and identify patterns, relationships, and trends. These algorithms can learn

from the data to make predictions and estimate asset prices. Machine learning plays a significant role in asset pricing in the finance market due to its numerous advantages and contributions. Here are some key significance of machine learning in asset pricing:

- *Improved Prediction Accuracy:* Machine learning algorithms have the ability to analyze vast amounts of historical and real-time data, capturing complex patterns and relationships that may not be apparent through traditional statistical models. By leveraging sophisticated algorithms and advanced computational power, machine learning models can enhance the accuracy of asset price predictions, providing investors with valuable insights for making informed investment decisions.
- *Handling Large and Complex Data:* Financial markets generate enormous volumes of data from various sources, including market data, economic indicators, news, social media, and more. Machine learning excels at handling large and complex datasets, extracting relevant information, and identifying hidden patterns and trends. This enables the modeling of intricate relationships between asset prices and a wide range of variables, leading to more comprehensive and accurate predictions.
- *Identification of Nonlinear Relationships:* Traditional asset pricing models often assume linear relationships between input variables and asset prices. However, financial markets exhibit complex, nonlinear dynamics. Machine learning techniques, such as neural networks and support vector machines, can capture these nonlinear relationships, allowing for a more realistic modeling of asset pricing dynamics. This helps in uncovering valuable insights and avoiding oversimplifications inherent in traditional models.
- *Adaptability to Changing Market Conditions:* Financial markets are dynamic and subject to evolving conditions and trends. Machine learning models have the advantage of adaptability, enabling them to adjust and learn from new data, market trends, and emerging patterns. This flexibility allows the models to continuously update and refine their predictions, keeping pace with changing market dynamics and improving their accuracy over time.
- *Incorporation of Unstructured Data:* Traditional asset pricing models often rely on structured financial data. However, valuable insights can also be derived from unstructured data sources, such as news articles, social media sentiment, and textual data. Machine learning techniques, including natural language processing (NLP) and sentiment analysis, enable the extraction and analysis of information from unstructured data sources, enriching the asset pricing models with additional inputs for more accurate predictions.
- *Risk Assessment and Management:* Machine learning models can help in assessing and managing investment risks. By analyzing historical market data and identifying risk factors, these models can estimate the probability of specific risk events and their potential impact on asset prices. This information assists investors in optimizing their portfolios, hedging against potential risks, and managing their overall risk exposure more effectively.
- *Enhanced Market Efficiency:* The integration of machine learning in asset pricing contributes to improving market efficiency. By providing more accurate and timely predictions of asset prices, machine learning models facilitate better price discovery and reduce inefficiencies in the market. This benefits market participants by enabling more informed decision-making, improving liquidity, and fostering fairer and more transparent markets.
- *Deep Learning:* Deep learning is a subset of machine learning that utilizes artificial neural networks with multiple layers to extract complex features and capture nonlinear relationships in data. Deep learning models, such as deep neural networks and convolutional neural networks, have been applied to asset pricing tasks, including forecasting stock prices and estimating risk factors.

Deep learning has gained significant importance in asset pricing due to its ability to handle complex and unstructured data, extract valuable patterns and relationships, and generate accurate predictions. Here are some key significances of deep learning in asset pricing:

- *Handling Big Data:* Deep learning algorithms excel at processing large volumes of data, including financial statements, market news, social media sentiment, and alternative data sources. This capability allows for a more comprehensive analysis of market dynamics and better understanding of factors impacting asset prices.
- *Nonlinear Relationships:* Deep learning models are well-suited for capturing nonlinear relationships and complex patterns in financial data. Unlike traditional linear models, deep learning algorithms can uncover intricate interactions among variables, enabling more accurate pricing models and improved forecasting.
- *Feature Extraction:* Deep learning algorithms can automatically extract relevant features from raw data, reducing the need for manual feature engineering. This capability is particularly useful in asset pricing, where identifying and incorporating relevant features is crucial for accurate predictions.

- *Improved Predictive Accuracy:* Deep learning models have demonstrated superior predictive accuracy in asset pricing compared to traditional statistical models. By leveraging neural networks and sophisticated architectures, deep learning algorithms can capture intricate market dynamics and generate more accurate forecasts of asset prices.
- *Market Efficiency:* Deep learning techniques contribute to the efficiency of financial markets by incorporating vast amounts of data and processing information more efficiently. The ability to quickly analyze and interpret large datasets enhances market transparency and improves the speed and quality of investment decision-making.
- *Risk Management:* Deep learning models can assist in risk management by accurately assessing and predicting market risks. By analyzing historical data and market patterns, deep learning algorithms can identify potential risks and provide insights into portfolio optimization and risk mitigation strategies.
- *Portfolio Optimization:* Deep learning techniques can be applied to optimize portfolio construction and allocation. By considering various risk factors, asset correlations, and investment constraints, deep learning models can recommend optimal portfolio weights that maximize risk-adjusted returns.
- *Trading Strategies:* Deep learning can be leveraged to develop and enhance trading strategies. By analyzing market data in real-time, deep learning algorithms can identify trading signals, detect market anomalies, and generate buy/sell recommendations, aiding in automated trading and algorithmic strategies.
- *Risk-adjusted Pricing:* Deep learning models can provide more accurate estimates of risk-adjusted returns for individual assets and portfolios. By incorporating additional risk factors and analyzing historical data, deep learning algorithms can better assess the riskiness of assets, leading to more precise pricing models.
- *Innovation and Research:* Deep learning in asset pricing opens up new avenues for innovation and research in finance. It enables researchers to explore alternative data sources, develop novel methodologies, and gain deeper insights into market dynamics and asset pricing phenomena.
- *Natural Language Processing (NLP):* NLP techniques enable the analysis of textual data, such as news articles, financial reports, and social media sentiment, to extract relevant information and sentiments that may impact asset prices. NLP algorithms can process and interpret vast amounts of text data to uncover insights for asset pricing and decision-making.

Natural Language Processing (NLP) has gained significant importance in the field of asset pricing due to its ability to extract valuable information from textual data and sentiment analysis. Here are some key points highlighting the significance of NLP in asset pricing:

- *News and Sentiment Analysis:* Sentiment analysis is a subset of NLP that focuses on determining the sentiment or emotional tone expressed in text. By analyzing sentiment from sources like news articles or social media posts, sentiment analysis can provide insights into market sentiment and investor opinions, which can be incorporated into asset pricing models.

NLP techniques can analyze large volumes of news articles, financial reports, social media posts, and other textual data to extract sentiment and market insights. Sentiment analysis helps gauge market sentiment, investor emotions, and public opinion, which can have a significant impact on asset prices.

- *Information Extraction:* NLP algorithms can extract relevant information from unstructured data sources, such as company announcements, press releases, and earnings reports. By automatically processing and categorizing this information, NLP aids in identifying crucial events, such as mergers and acquisitions, earnings surprises, regulatory changes, and market trends.
- *Quantitative Models:* NLP can be integrated into quantitative models used in asset pricing. By incorporating textual data as additional inputs, models can capture the impact of news sentiment and other textual factors on asset returns. This helps refine pricing models and improve forecast accuracy.
- *Trading Strategies:* NLP techniques can assist in developing trading strategies by analyzing news sentiment and market-moving events. By incorporating sentiment analysis into trading algorithms, investors can exploit market inefficiencies and generate alpha.
- *Risk Management:* NLP-based sentiment analysis helps assess the impact of news events on asset prices, allowing for enhanced risk management. By monitoring and analyzing sentiment in real-time, investors can identify potential risks and adjust their portfolios accordingly.
- *Investor Sentiment:* NLP can be used to analyze social media sentiment and investor sentiment indicators. By understanding investor sentiment, asset managers can make more informed investment decisions and adapt their strategies to changing market sentiment.
- *Regulatory Compliance:* NLP techniques can aid in regulatory compliance by automatically monitoring and analyzing vast amounts of textual data for compliance violations, fraud detection, and market manipulation.

- *Reinforcement Learning:* Reinforcement learning is a branch of AI that involves training agents to make sequential decisions in an environment to maximize a reward. In asset pricing, reinforcement learning can be used to optimize trading strategies, portfolio allocations, and risk management approaches by learning from historical market data and dynamically adapting to changing market conditions.

Reinforcement Learning (RL) holds significant promise in the field of asset pricing, offering new avenues for understanding complex market dynamics and optimizing investment strategies. Here are some key points highlighting the significance of RL in asset pricing:

- *Adaptive Decision-Making:* RL algorithms can learn optimal decision-making strategies by interacting with the financial market environment. RL agents can adapt their actions based on observed market conditions, historical data, and rewards or penalties received from previous investment decisions. This adaptability is crucial in dynamic and uncertain market environments.
- *Portfolio Optimization:* RL can be applied to portfolio optimization problems, where the goal is to allocate assets in a way that maximizes risk-adjusted returns. RL agents can learn to dynamically adjust portfolio weights based on changing market conditions, economic factors, and asset correlations, leading to more efficient portfolio allocation strategies.
- *Trading Strategy Development:* RL algorithms can learn trading strategies that maximize returns while managing risk. RL agents can learn to identify patterns, exploit market inefficiencies, and adapt to changing market dynamics in real-time. This can lead to the development of automated trading systems that outperform traditional rule-based approaches.
- *Risk Management:* RL can help manage risk by optimizing risk-reward trade-offs. RL agents can learn to balance exposure to different asset classes, adjust portfolio weights based on risk factors, and dynamically hedge positions to mitigate downside risk. This adaptive risk management approach can enhance risk-adjusted returns and reduce portfolio volatility.
- *Market Microstructure Analysis:* RL can be used to study market microstructure dynamics, such as order book dynamics, liquidity provision, and market impact. By modeling the interactions between traders and the order book, RL algorithms can provide insights into price formation, trading strategies, and market manipulation.
- *Market Simulation and Scenario Analysis:* RL can be utilized to simulate market scenarios and conduct what-if analyses. RL agents can learn from historical data to generate synthetic market scenarios and assess the impact of different events or policy changes on asset prices and portfolio performance. This aids in stress testing investment strategies and evaluating risk exposures.
- *Algorithmic Trading:* RL techniques can be applied to develop algorithmic trading systems that autonomously execute trades based on learned patterns and market signals. RL agents can adapt their trading strategies based on feedback from market conditions, leading to more efficient and profitable trading systems.
- *Genetic Algorithms:* Genetic algorithms simulate the process of natural selection to find optimal solutions to complex problems. In asset pricing, genetic algorithms can be employed to optimize portfolio construction, asset allocation, and trading strategies by iteratively evolving and selecting the best-performing solutions.
- Genetic Algorithms (GAs) have proven to be a valuable tool in asset pricing, offering a unique approach to solving complex optimization problems and exploring large search spaces. Here are some key points highlighting the significance of GAs in asset pricing:
- *Optimization of Investment Strategies:* GAs can be used to optimize investment strategies by searching for the best combination of asset allocations, risk management rules, and trading rules. By encoding these strategies into a population of candidate solutions, GAs can evolve and refine these solutions over generations, leading to more robust and adaptive investment strategies.
- *Feature Selection and Model Calibration:* GAs can assist in feature selection by identifying the most relevant variables or factors that contribute to asset pricing models. By searching through a large pool of potential features, GAs can identify the subset of variables that have the most predictive power, leading to more accurate and parsimonious pricing models.
- *Portfolio Optimization:* GAs can be applied to portfolio optimization problems, where the objective is to find the optimal allocation of assets that maximizes returns or minimizes risk. GAs can explore different combinations of assets and adjust portfolio weights based on performance evaluations, risk measures, and other constraints, leading to more efficient and diversified portfolios.
- *Parameter Estimation:* GAs can assist in parameter estimation for asset pricing models by searching for the best set of model parameters that fit historical data or maximize the model's performance metrics. By iteratively evolving and evaluating candidate parameter sets, GAs can improve the accuracy and robustness of pricing models.

- *Risk Management:* GAs can aid in risk management by optimizing risk-reward trade-offs and identifying optimal hedging strategies. GAs can evolve portfolios that dynamically adjust asset allocations based on market conditions, risk factors, and investment objectives, helping to manage downside risk and enhance risk-adjusted returns.
- *Model Ensemble Construction:* GAs can be used to construct model ensembles by combining multiple pricing models or investment strategies. By evolving a population of models and selecting the best-performing ones, GAs can create diversified ensembles that capture different market conditions and improve overall prediction accuracy.
- *Event-Driven Investment Strategies:* GAs can be employed to develop event-driven investment strategies that exploit market anomalies or react to specific events. By incorporating event-based rules and trading signals into the genetic encoding, GAs can evolve strategies that capitalize on market inefficiencies and generate profits during specific market conditions.
- *Bayesian Inference:* Bayesian inference combines prior knowledge and observed data to estimate probabilities and make predictions. In asset pricing, Bayesian inference techniques can be used to update beliefs about asset prices based on new information and incorporate uncertainties into pricing models.

RISK ASSESSMENT AND RETURN PREDICTION

AI plays a crucial role in risk assessment by analyzing complex data sets and identifying hidden risk factors. This section discusses how AI techniques can help in identifying and quantifying different sources of risk, allowing investors to make more accurate risk assessments. Furthermore, it explores how AI-based models can predict asset returns by considering various market and economic factors.

PORTFOLIO OPTIMIZATION AND ASSET ALLOCATION

AI-driven portfolio optimization is a key area of application in asset pricing. This section examines how AI techniques can assist in constructing well-diversified portfolios by considering factors such as asset correlations, risk profiles, and market conditions. It discusses the potential of AI to optimize asset allocation strategies and achieve better risk-adjusted returns.

MARKET EFFICIENCY AND ALGORITHMIC TRADING

AI-based algorithms have the potential to contribute to market efficiency and improve trading strategies. This section explores how AI techniques are utilized in algorithmic trading to identify market inefficiencies, exploit price discrepancies, and enhance liquidity. It also discusses the challenges and ethical considerations associated with AI-driven trading.

CHALLENGES AND LIMITATIONS

Interpretability: One of the primary challenges with AI in asset pricing is the lack of interpretability in complex machine learning models. AI models, such as neural networks, often operate as black boxes, making it difficult to understand the reasoning behind their predictions. This lack of interpretability raises concerns, as it becomes challenging to explain the pricing decisions to regulators, investors, or other stakeholders.

Data Biases: AI models heavily rely on historical data for training, which can introduce biases into the models. Biases may arise from data selection, data quality, or inherent biases present in historical data. These biases can impact the accuracy and fairness of asset pricing predictions, leading to suboptimal decision-making and potential disparities in pricing for different assets or market segments.

Model Robustness: AI models are susceptible to overfitting or underperforming in certain market conditions. The models may struggle to generalize well to unseen data or adapt to changing market dynamics. Maintaining model robustness is crucial to ensure consistent and reliable asset pricing predictions.

ONGOING RESEARCH AND DEVELOPMENT EFFORTS

Explainable AI (XAI): Researchers are actively working on developing methods to enhance the interpretability of AI models in asset pricing. Techniques such as model-agnostic interpretability, feature importance analysis, and rule extraction aim to provide explanations for AI-based pricing decisions. These approaches help bridge the gap between the complex nature of AI models and the need for transparent and understandable pricing mechanisms.

Fairness and Bias Mitigation: Addressing biases in data and models is a crucial area of research. Techniques like data augmentation, bias-correction algorithms, and fairness-

aware learning methods are being explored to ensure that AI models in asset pricing are fair, unbiased, and provide equitable pricing outcomes for different market segments.

Adversarial Robustness: Researchers are investigating ways to enhance the robustness of AI models against adversarial attacks or manipulations. Adversarial training methods and anomaly detection techniques are being explored to make AI-driven asset pricing models more resilient and less susceptible to manipulation or exploitation.

FUTURE DIRECTIONS

Integration of AI with Other Technologies: The integration of AI with other emerging technologies, such as natural language processing, blockchain, and big data analytics, holds promise for asset pricing. By leveraging these technologies, AI-driven asset pricing models can incorporate a broader range of data sources, improve real-time data processing capabilities, and enhance pricing accuracy.

Reinforcement Learning and Meta-Learning: Reinforcement learning techniques, which involve learning optimal pricing strategies through trial and error, offer potential for improving asset pricing. Meta-learning approaches that enable models to learn and adapt from past experiences across different markets or assets also hold promise for more effective and adaptable pricing methodologies.

Regulatory Frameworks and Standards: As AI adoption in asset pricing increases, the development of robust regulatory frameworks and industry standards becomes essential. Regulators need to address challenges related to model explainability, fairness, transparency, and data privacy. Establishing guidelines and best practices can ensure the responsible and ethical deployment of AI in asset pricing.

Integration of Alternative Data Sources: The inclusion of alternative data sources, such as social media sentiment, satellite imagery, or web scraping data, can provide additional insights for asset pricing models. Exploring and integrating diverse data sources can enhance the accuracy and timeliness of AI-driven pricing predictions.

Ongoing research efforts focus on improving the interpretability, addressing biases, and enhancing the robustness of AI models in asset pricing. Future directions include the integration of AI with other technologies, reinforcement learning approaches, the evolution of regulatory frameworks, and the exploration of alternative data sources. These advancements aim to overcome the challenges and limitations associated with AI in asset pricing and drive innovation in financial markets.

CONCLUSION

The article concludes by highlighting the transformative potential of AI in asset pricing. It emphasizes the need for collaboration between finance professionals, AI experts, and regulators to ensure responsible and ethical integration of AI techniques. By harnessing the power of AI, financial markets can benefit from improved pricing accuracy, risk management, and decision-making, ultimately creating more efficient and transparent market environments.

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Effective Recruitment Process and Organisational Performance – An Analysis

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Abstract *Effective and efficient organisations are not built merely on investment and return. But they are made upon the quality of the workforce and its commitment to the organisational objectives. Investments are also necessary to attract, train and retain superior human capital. Human Resources (HR) constitute the most valuable asset in any organisation with a developmental perspective. Recruitment is defined as a process of searching for prospective employees and stimulating them to apply for the job. Organisational performance is the product of the individual contribution of the employees through the impact of leadership competency and organisational culture. The potential success of a business enterprise depends on its organisational performance which means its ability to effectively implement to achieve the strategic organisational objectives. It is a known fact that talented employees are the backbone for the success of any organisation. They have the capability to plan the emerging environment in the right perspective and as such new business opportunities could be explored well. There is a direct and positive relationship between effective recruitment process and higher organisational performance in the form of productivity, customer satisfaction, profitability and corporate reputation.*

Keywords *Effective Recruitment Process, Organisational Performance, Customer Satisfaction, Employee Satisfaction, Strategic Decision Making, Corporate Reputation, Effective Selection*

INTRODUCTION OF THE STUDY

Recruitment and selection are the core functions of Human Resource Management in an organisation. Human being are the source of all productive endeavours in an enterprise. Organisational functions depends up on the effort of individual members. If the effort and energy of every single individual are coordinated and directed towards the realisation of the organisational objectives, the synergy so achieved would well ingrained in the sum of individual effort. An organisation is really a basic form of assemblage of human beings bonding together for mutual benefits. Consequently and inevitably, an enterprise is made or unmade by the quality and behaviour of its people. The distinguishing factor of an organisation is undoubtedly, the ability of its human resources to face up to challenges and utilise its vast potential to deliver required results. It is a known fact that the effective utility of all other resources such as land, capital or equipment depends on the capability of human resources. This view of human resource management is developmental in its core content. Based on the perception that human beings are the central resource in any organisation and in any society, it concern itself with growth and betterment of employees towards higher levels of capacity, productivity and satisfaction (Rajan & Sanitha, 2018).

Effective and efficient organisations are not built merely on investment and return. But they are made upon the quality of the workforce and its commitment to the organisational objectives. Investments are also necessary to attract, train and retain superior human capital. Human Resources (HR) constitute the most valuable asset in any organisation with a developmental perspective. It is a fact that the relative performances of economies, industries and corporate enterprises are critically linked to quality of human contribution. Even the achievements from the intervention of superior technology in any field are closely linked to its interface with human factor with high skills and viable attitude. The impact of globalisation has changed the organisational environment in all walks of life including business. The power of computers and telecommunication tools with the amazing role of technology, the entire society has converted into a knowledge economy. The twin impact of globalisation and information technology have resulted a fundamental change in the design of human resources activity.

Human resource management is a process of bringing people and organisations together so that the objectives and targets of each other can be met. The role of managers in the area of human resource is shifting from that of a controller and screener to the role of a planner and change agent. HR leaders are the new corporate heroes today. The game in the human resources playground has come with a new shape, new principles and techniques. So it is not possible to show a good activity report whether financial or operating, unless the relationship with the team is in order. Over the years,

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highly skilled and knowledge based jobs are on the increase while low skilled jobs are on declining. Thus it becomes necessary for future skill mapping through appropriate HRM interventions.

The present day trends in managing people in the dynamic business scenario reflects that Attracting, Managing, Developing, Nurturing talent and Retaining people have emerged to be the single most critical issue. The success of a business units rests on the creative human capital placed in a flexible platform. The criticality of the labour market is reflected through the availability of employees with required talents. The new avatar of talent is the knowledge professionals that is who should be innovative, business savvy and quick on the updating (Robert, 2017). Those individuals usually have an instinctive ability to network as well as possessing unbridled ambition. They are propelled by an urge to do experiment and scan new avenues of creativity. These knowledge professionals have the capability to gravitate to an organisation that is flexible and robust in performance. They look for organisation with good value system and its ability to provide challenging work environment especially with latest technology. This has led to organisations proactively taking measures on three aspects. They create an organisational ambience where talent can bloom. The organisation usually put in place systems that help unleash the potential of partner employees. And thirdly, the company build a reward and recognition mechanism that provides value for people. In this context it is necessary to look into various definitions of human resource management.

OBJECTIVES

The core objective of the study is to construct a conceptual model for establishing the relationship between Effective Recruitment Process and Organisational Performance. It is a fact that if the recruitment process is effective definitely right persons will be recruited and posted them in right position and the result is better organisational performance.

METHODOLOGY

Being a conceptual analysis secondary data is used throughout the study. The secondary data are collected from various sources such as Text Books, Research Articles, Government Reports and Publications from both online and offline sources.

RECRUITMENT AND ITS COMPONENTS

In today's highly complex and challenging situation, the choice of right employees has definitely a far reaching implication within the organisational environment. A rigorous and effective recruitment process is a much needed one as a critical function of human resource management. The recruitment process becomes more critical because this is the first stage for identifying a person suitability to become a part of the organisation. If the process of recruitment is defective in any way that will definitely affect the organisation as a whole when an unwarranted person is being placed. And the recruitment process become more challenging also. The recruitment process should be designed in such a way that it should be attractable to the qualified and talented candidates. Otherwise right persons could not be found for the right positions in the organisation. Identification of suitable sources for recruitment is another problem. Image of the company and internal organisation policy for recruitment often act as constraints in the recruitment process. The job description and specification should be prepared with the real requirement of the positions otherwise the company will suffer in the long run with personnel who have lacking the required capability level (The Work Foundation, 2013). Maynooth (2006) in human resource management reveal that high employee turnover faced by many organisations is due to the effect of the liberalisation policy and various other reasons. Changes in the job requirements is another reason (Falcone, 2012). High level of expectation from the part of the employees and a new learning environment created in the organisations are also created concern to the recruitment process (Kneeland, 2005). Organisations demand high level of performance and innovative outlook to face the competition are also created challenges to the recruitment process. As a result it is the responsibility of the top management to build and maintain an effective human organisation in order to undertake the issues posed by the challenging environment. The recruitment and selection process should have the inbuilt capability to provide a competitive workforce for the organisation.

Recruitment is defined by Mahbub (2020) as a "process of searching for prospective employees and stimulating them to apply for the job". Usmani (2020) put as "recruiting is the process of generating a pool of qualified applicants for organisational jobs". Allen (2007) put as "recruiting is that set of activities that an organisation uses to attract candidate who have the abilities and attitude needed to help the organisation achieve its objectives".

There are two sources of recruitment. They are internal and external sources. Both sources are utilised by the organisations to fill the vacant positions. Initially higher job positions are filled from internal sources while most of the lower job positions are opened to external sources. Specialists and highly talented employees required for emerging areas are often recruited from outside or external sources. The usual external sources are Employment Exchange and

Agencies, Advertisement, College and University centres. Walk-in recruitment is another method usually followed for temporary and casual work. Trade and Job Fest are conducted for recruiting new people for the organisation. Deputation from other organisations are also considered for filling the vacancies.

Once a number of application have been received the next step is to screen the candidates for final selection. Screening is the process of limiting the number of applicants to a manageable level who have sufficient qualifications and competencies to get selected. Screening is done through the elimination of ineligible candidates by scrutiny of the application. Conducting preliminary test and screening interviews are also part of the screening process.

Selection is "the process by which an organisation chooses from a list of screened applicants who best need the selection criteria for the position available" (Hardini et al., 2019). The fundamental objective of selection is to acquire such persons who are most likely to meet the enterprises' standards of performance. The employee satisfaction in the matter of his needs and wants as well as his growth and development as a member of the organisation are a part of the objectives. There are five steps in the selection process. They are Interview, Group Discussion, Reference check, Physical examination and Placements (Stoilkovska, 2015).

The interview is a process where the applicant is given an opportunity to personally present and provide his credentials for evaluating by the interview board. There are different types of interviews on the basis of the nature, purpose, type and size of organisation. Interview can be classified in to five as regards the nature is concerned. They are Structured interview, Unstructured interview, Stress interview and Depth interview. Group Discussion is often used as a method of assessing candidates for rating their various skills, knowledge, attitude and emotions. Observing judges are employed to assess the performance of each participant in the process of group discussion. It is considered as a method used to forecast future performance of selected candidates Reference check is used after the in-depth interview and before formal appointment to verify the character and conduct of the selected candidates. The certificate issued by the previous organisations usually contain such information as dates of employment, job responsibilities and title, candidates' job performance, attitudes and reasons for termination. Physical examination is usually done in the final stage before the appointment. When the select list of candidates have been finalised, it is a usual procedure to put each candidate through a physical examination. The scope and rigorousness of the physical examination depend upon the nature and requirement of the job.

ORGANISATIONAL PERFORMANCE

The concept of organisational performance is based up on the idea that an organisation is voluntary association of productive assets including human, physical and capital resources for the purpose of achieving some shared objectives (Tim Hannagan, 2015). The essence of performance is the creation of value. The value created by the use of assets in the direction of the organisational objectives and the result is the outcome of the organisational performance.

The potential success of a business enterprise depends on its organisational performance which means its ability to effectively implement to achieve the strategic organisational objectives (Syed, 2012). Sang (2005) defines organisational performance as the performance of a company as compared to its goals and objectives, Mastrandla et al. (2014) says the effectiveness of an organisation consist in the efficiency of its individual employees and when the performance of all the employees put together is the organisational performance which is seen as a function of leadership. In particular employee performance could be managed by manipulating the factors on which it depends. And also the performance of the employees is influenced by their age seniority and personal goals. The efficiency of the organisational performance is a product of the organisational climate also. And the key factors that contribute to the organisational performance that lead organisational competency. Wood (2016) conducted a study on organisational performance and leadership competency. The study reveals that the success of an organisation depend on competency of its leaders and the organisational culture those leaders creates. The believes and values of leaders in the organisation will always influence its performance. And also noted that leadership competency can improve employee performance.

Organisational performance is the product of the individual contribution of the employees through the impact of leadership competency and organisational culture. There are many studies on organisational and behavioural background of organisations which have strong linkage with employee and organisational performance. Price (2007) defines employee performance as the effective orientation of an employee in regard to his job. Aguinis (2019) notes that employee performance constitute an individual overall perception and evaluation of the work environment which is viewed as a positive emotional status.

DISCUSSION AND ANALYSIS

The present study is intended to establish the relationship between effective recruitment process and organisational

performance. There are a number of components which constitute the recruitment process. The recruitment process to be effective, it should contain effective recruitment factors.

Effective Recruitment Factors

The literature reviews have been supplemented a number of effective recruitment factors which are portrayed below. These variables are:

- Well-defined human resource planning.
- A clear and comprehensive employee Requisition.
- Accurate Job Description and Job Specification.
- Correct evaluation of sources of recruitment.
- Effective Selection process.

The effective recruitment factors constituting effective recruitment process are described below:

A Well-Defined Human Resource Planning

Human resource planning is a sub-system of total organisation planning which facilitates realisation of the company's objectives for the future by providing the right types and number of personnel (Walker & James, 2009). Human resource planning is otherwise known as manpower planning and employment planning. The objectives of human resource planning are a) to meeting future personnel requirements, b) to cope with the environmental changes, c) to create highly talented personnel and d) to promote the organisational strategies. It is a continuous organisational process with an amount of flexibility to adjust with the long term and short term plans. The fundamental aims of human resource planning are forecasting the human resource requirements in tune with the change in the environment for realising organisational goals. It is also intended to utilise the human resources effectively and promoting the employees. This is the first step towards the recruitment process (Marcky & Johnson, 2011).

A Clear and Comprehensive Employee Requisition

Employee requisition is a formal document that the departmental managers use to request the human resource departments for hiring new employees. Employee requisition is otherwise known as job requisition. It serves as a request for the new hire and provides an explanation of why the new vacancies have been raised. A job requisition is an important part of the hiring process. Usually the departmental managers have to use the prescribed format of the job requisition for informing the HR department. A job requisition usually consists of various elements such as the job title, the name of the hiring manager, the department and the role of the new employee, the type of employment, the preferred chart date, the salary and other benefits, budget option and the justification for making a new hire (Mathis & Jackson, 2008).

Accurate Job Description and Job Specification

A job description is a detailed document of the vacant position that state the job title, job location, duties, responsibilities and job role. The human resource manager creates this documents to invite application from the potential candidates who are intended to fill the vacancies. The salary, allowances and incentives associated with the position are also included in the job description. A job description should be synchronised with the recruitment and selection process and thereby it simplifies the work of the HR Department. It provides a framework to build the job specification. It should make easy for the company to search for suitable candidates where the company will provide its expectation from the prospective employees. It acts as a support system to the prospective candidates to get a familiarity with the work place environment. Job specification is the document which states the attributes, skills, knowledge, educational qualifications and work experience needed in a candidate to perform a particular job. The manager is bound to prepare the job certification after preparing the job description. The manager should specify in the job specification that the necessary abilities and attributes needed for accomplishing the task. Thus the essential components of job specification are educational background, skill and employment experience of the potential employees. Thus the job specification defines the selection criteria of the candidates. It makes it easy for the recruiting managers to screen the resume for prospective candidates and serves as a bench mark for conducting orientation and training for the employees (Dawal, 2016).

Correct Evaluation of Sources of Recruitment

The recruiting market is challenging and ultra-competitive and there is a need to have a clear process in place for evaluating recruiting sources and their effectiveness for the organisation. It is essential to determine the key Metric for measuring the effectiveness of the source. The sources selected should be appropriate to get the candidates with right qualifications, skills and experiences as per the job requirements. It is the duty of the management team to collaborate honestly in the process of recruitment. The logistics and systems should be clear and suitable for the recruitment. There should be an effective plan for managing the recruitment results properly and the recruitment plan and criteria should transparent and made known to all in the recruitment process. The evaluation outcome should be used in such a way to accomplish the organisational objectives effectively (Keshav, 2013).

Effective Selection

Selection is "the process by which an organisation chooses from a list of screened applicants who best need the selection criteria for the position available" (Demerouti, 2016). There are usually eight steps in the selection process such as application, resume screening, screening call, assessment tests, in-person interview, background checks, reference checks, decision and job offer. Application phase in the selection process is a passive act and the candidate has to respond to the job advertisements. Once a number of application have been received the next step is to screen the candidates for final selection. Screening is the process of limiting the number of applicants to a manageable level who have sufficient qualifications and competencies to get selected. The screening process have different steps. The first step is elimination of ineligible applicants. The second step is process of collecting information from the candidates with the general background of education, work history, special skill, physical condition and personal references. A preliminary test is also conducted to screen in the best qualified candidates. Screening interviews are used to limit the number of applicants Crewson (2017). The screening call for phone screen is among the initial hiring stages where recruiters short list applicants. The purpose of the call is to establish whether the applicant is truly interested in the job and at least minimally qualified to do it successfully.

The assessment test is a tool used in the selection process to assess the applicant's ability to do the job successfully. These assessment can take place in different forms in the selection process. They are experimental tests, written tests, online tests, practical skill tests in order to assess the attitude, intelligence, capability, memory and job knowledge of the candidates (DeNisi, 2017).

Interview is a personal meeting arranged as a part of the selection process to directly present the candidate's credentials before a designated expert team in order to assess the suitability of the candidate for the job. There are different types of interview on the basis of the nature, purpose, type and size of organisation Desslerand Gary (2014). Interview can be classified in to five as regards the nature is concerned. They are structured interview, Semi-structured interview, unstructured interview, Stress interview and Depth Interview. In the case of structured interview, the interviewer follows a predetermined approach defined to ensure that all pertinent factors relating to the candidates' qualifications and suitability will be bone over. In the semi-structured interview, the major questions to be asked are worked out beforehand Drucker (2012). Interviewer also has the option to ask advanced questions in certain areas. Unstructured interview is a process of active listening by the interviewer while the candidates seek. It is usually used in psychological counselling and widely used in selection. Stress interview is a special type of interview defined in such a way to assess and provide useful information as to whether a person would be able to cope with stress on the job or not (Dawal, 2019). Stress interviews are intentional attempt to provide tension and pressure to an applicant to see how well he respond to the tensions and pressures (Dyer & Reeves, 2005). In depth interview an attempt is made to cover completely the life history of the applicant and make a comprehensive profile of the candidate. The profile of the candidate usually include frozen aspects of candidates' personality such as education, extra-curricular activities and early childhood experiences. In addition to the flexible aspect such as hobby, interests, desires, aspirations and goals (Yound, 2016).

Background check of the candidates is a process of pre-employment check to make sure that the candidate is eligible and suitable for the particular job position. The verification of records pertaining to the credit report, criminal records, driving records and the verification reports of identity, education, work history and drug test. These checks are most useful in the selection process especially when there is high risk involved in employing someone unsuitable in a particular job (Subramony, 2009). Reference check of the candidates is usually done in the final stage of the selection process. It is a feedback analysis of the performance of the candidates from their previous employers and managers in order to now their credentials related to conduct and work. The company will usually make enquiries and contact the people concerned to get the information directly (Schaufeli, 2014).

After taking the final decision on the suitability of the candidates to be included in the final select list, after a series of well organised selection process for recruiting new employees. The company will fix on the perfect hire to provide the job offer. The job offer process is a critical one and it should be done in right manner to welcome the new employees in the organisation in order to occupy the new position. Usually formal job offer letter will be given to the selected candidates offering the job indicating the job title, salary and related information (Rober et al., 2015).

The Components of Organisational Performance

The second construct or dependent variable of the present study is the organisational performance. Organisational performance is the product of the individual contribution of the employees through the impact of leadership competency and organisational culture. There are many studies on organisational and behavioural background of organisations which have strong linkage with employee and organisational performance. Price (2001) defines employee

performance as the effective orientation of an employee in regard to his job. Scmcane et al. (2002) notes that employee performance constitute an individual overall perception and evaluation of the work environment which is viewed as a positive emotional status. The result of the previous studies reviewed in the preceding sections of this chapter, we have come to a conclusion that there is a positive link between recruitment process and organisational performance. It can be assumed that if the recruitment system works in an effective manner, the organisational performance will be effective (Riggle, 2019). The construct of organisational performance is constituted with the level of performance in different functional areas such as operation, marketing, finance, human resource, information and general administration. Thus the independent variables for assessing the level of organisational performance are:

- Productivity
- Customer Satisfaction
- Profitability
- Employee Satisfaction
- Strategic Decision Making
- Corporate Reputation

These independent variables are briefly described below.

Productivity

Productivity is anything that make the organisation functions better. It is doing right thing rightly. The productivity that can be measured in terms of the production efficiency especially in the manufacturing industry where it is the value of the ratio of output and input. Inputs are the resources used for the functions to be performed (Peach et al., 2011). That performance is converting resources into output, product or service which is called process. The product or service is the output of the productive activity. Thus productivity is the relationship between the output generated from a system and the input used to create it. A higher productivity will give a competitive advantage to the organisation. It is an indicator of progress of the organisation where scarce resources are utilised at maximum. Productivity is the single most factor for beating the competition in the market and it act as a guide to the management. Productivity enables the management to control the performance of the company by identify the comparative benefits arising out from use of input. As we have already seen productivity emphasis the efficient utilisation of the factors of production as per the target set and it attempts to eliminate all types of waste. It facilitates the comparison of the performance of a company to its competitors. In brief, productivity is the prime factor determines the success of the organisation (Paauwe & Boselie, 2015).

Customer Satisfaction

The simple meaning of customer satisfaction is the ability of a product or service to meet expectation of the customer on its performance. It is used as a measure to determine how far the product and services supplied by a company meet or surpass the customers' expectation. Customer is the boss of the market and he dictates the market trends and its direction. That is why it is usually said to be the business organisations are dependent on the customer. The satisfied customers will help the company by bringing the new customers through the "word of mouth" campaign (Prasad, 2016). Thus customer satisfaction provides loyal customers to the business organisations. The factors affecting customer satisfaction are price, quality, brand name, features of the product as well as reputation of the company and services provided to the company. In this context it is relevant to note that Toyota's philosophy "customer first". This philosophy states that "a product should never be sold unless it has been carefully manufactured and has been tested thoroughly and satisfactorily (Rubén Lado-Sestayo, 2014).

Profitability

Profitability is the ability of a business organisation to earn a profit. Profit is simply the revenue left over after the payment of all costs and expenses related to the business activity. There are four key areas in the realm of a business organisation that can be utilised for deriving profitability. These areas are reduction in cost, increase in turn over, enhancement in productivity and improvement in efficiency. The concept of the term business itself is associated with the term profit. The basic purpose of any business unit is to make a profit because all the factors of production demand its own share of revenue of the business in order to remunerate their sources (Serrat, 2019). Profit alone is the prime factor determine the survival and growth of business units whether it is small or big. If a company could not make a profit for a number of years, definitely that organisation will disappear from the business fields. Thus profitability is the prime most objective of any business organisation. There are different types of profitability. Profit on the general business activities such as gross profit or net profit. Profitability like Return on Investment where it is meant the overall return derived for a particular year for total investments both fixed and current assets. Thus first measure considered for organisational performance and success is its profitability (Prasad, 2015).

Employee Satisfaction

Employee satisfaction or job satisfaction is usually considered as the mindset of the employees towards their organisation in terms of their loyalty, commitment and engagement.

Employee satisfaction is a situation in which how contented or satisfied employees are with their job. It is the foundation up on which employee engagement can grow and thrive. There are many factors which affect directly or indirectly the employee satisfaction. The most important factor influencing their satisfaction is their compensation and other benefits to lead a decent life. Strong organisational leadership is another important factor which enhances employee satisfaction (Rajan & Sanitha, 2016). Quality of work environment and effective communication have direct linkage with employee engagement and satisfaction. The approach of managers and supervisors is another factor affecting the satisfaction of employees. Thus the key elements of employee satisfaction are performance related pay, paid holidays, upward mobility in the organisation, healthcare of employees and a safe and social workplace. Thus a team of satisfied employees are the real asset of the organisation for maintaining its survival and rewarding growth (Paul & Anantharam, 2013).

Strategic Decision Making

Decision making is the process of selecting a course of action from among the many alternatives. Strategic decision making is the prominent task of the senior management. In the process of strategic management the basic thrust of strategic decision making is to make a choice in the right platform to be adopted for a course of action. It is criteria based decision making. Rationality, Creativity, Variability, Subjectivity and Collectiveness are the guiding principles of strategic decision making in order to make right decisions. Henry Mintzberg, the celebrated management expert commented on strategic decision making as "the key managerial process are enormously complex and mysterious drawing on the vaguest of information and using the least articulation of mental process. These processes seems to be more related and holistic than ordered and sequential and more intuitive than intellectual" (Norris, 2013). Thus it is more important that strategic decision making is difficult to perform due to the fact that it could not be analysed and explained easily. A lot of intelligible information from the business environment are really required for effective strategic decisions. Thus information management of the business organisation plays a crucial role in supplying very vital information to the top management for successfully involving in strategic decision making process. Strategies of the organisations are evolved from strategic decision making (Mondy, 2012).

Corporate Reputation

Corporate Reputation is the public image of a company in the society. Another sense, it is how the company is perceived by its stakeholders. Thus a company's corporate reputation is the sum of all views and believes held about the company based on its history of performance and its future prospects in comparison to its competitors. There are three elements of reputation in the term corporate reputation. They are brand reputation, organisational reputation and stakeholder reputation (Mihalj, 2019). Alignment of three vital factors such as to build, sustain and protect on organisation's reputation in the form of image, identity and personality. Organisation's image is what the stakeholders think of the company. The identity of a company is "what the company says it is". Personality as a part of corporate reputation which means "what the company is all about". The main components which make the corporate reputation are its ethical stand, financial performance, leadership quality and its reliability. Equally important in the matter of corporate reputation are its customer focus, corporate social responsibility, emotional appeal, quality in dealings and the social approach of the management team. Thus corporate reputation as a concept has wider and long term impact on the organisational performance of companies (Raymond et al., 2015).

CONCLUSION

It is clear from the above analysis that if the recruitment process is built on the effective recruitment factors efficient workforce could be a reality in an organisation. It is a known fact that talented employees are the backbone for the success of any organisation. They have the capability to plan the emerging environment in the right perspective and as such new business opportunities could be explored well. They have an innovative mind to bring the corresponding changes in the organisational set up as per the changing demand of the customer groups. Thus the new opportunities will be capitalised easily by successful organisation where right persons are in the right job. This formula of right person in the right job can be brought in the realm of an organisation only by means of effective recruitment process. It is true that there are effective factors which constitute an effective recruitment process. There is a direct and positive relationship between effective recruitment process and higher organisational performance in the form of productivity, customer satisfaction, profitability and corporate reputation. Thus the correlation between effective recruitment process and organisational performance is positive and direct.

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The AI Era: The Future of Farming

M. Benita*

Abstract *Farming practises have undergone a revolution due to the swift progress in agricultural technology in recent times. The sustainability of our food system is being threatened by global issues like population increase, climate change, and resource scarcity, thus these technologies are becoming more and more important. There are several manual techniques involved in traditional farming. There are a lot of benefits to using AI models in this regard. By using AI, many problems are resolved and the negative aspects of conventional farming are lessened. In agriculture, artificial intelligence may support soil health investigations to gather data, track meteorological conditions, and suggest fertiliser and pesticide applications. Using farm management software helps farmers make better decisions at every step of the crop-cultivation process, increasing productivity and profitability simultaneously. This article will go over the many applications of AI in agriculture as well as its limitations.*

Keywords *Farming, AI, Agriculture, Crop Cultivation, Farmers, Application of AI, Technology*

INTRODUCTION

Over the next several years, AI will undoubtedly play a bigger and bigger part in agricultural and food sustainability. Agricultural technology has always been at the forefront, from early tools to irrigation to tractors and artificial intelligence. Every advancement has made farming more efficient while lowering its difficulties. However Artificial Intelligence is a collection of programming-automated technologies rather than a physical object. Essentially, an AI system learns from data and then applies that knowledge to solve issues, much like a human thinks. The agricultural sector will need to adapt if AI is to drive the industry's revolution. It is necessary to educate and train farmers in the usage of AI-powered technologies. Because of food waste, climate change, and other issues, around one billion people still experience hunger and malnutrition even though there is enough food produced to feed everyone on the planet. Thankfully, the application of artificial intelligence (AI) in agriculture has promise for revolutionising food systems and mitigating the world food issue. AI can assist farmers in making data-driven choices, maximising resource utilisation, and minimising environmental impact by analysing data from many sources.

APPLICATIONS OF AI IN AGRICULTURE

In agriculture, Crop management involves planting seeds, monitoring their development, harvesting them, storing them, and distributing them. It may be summed up as the endeavours aimed at enhancing the yield and growth of agricultural goods. A thorough comprehension of the crop class in relation to its timing and kind of flourishing soil will undoubtedly boost crop production. To deal with the water shortage brought on by the soil, the weather, or insufficient irrigation, farmers must mix a variety of crop management techniques. A thorough awareness of weather patterns aids in making decisions that will provide a high-quality and productive crop output. Decision-rule-based flexible crop management systems ought to be the standard. The drought's timing, severity, and predictability are crucial considerations when selecting between cropping options (Debaeke et al., 2004).

AI systems are capable of reliably estimating missing nutrients and performing chemical soil analysis. It gathers information from soil samples and gives farmers precise assessments of the general condition of the soil and any nutrients that are missing. This enables farmers to optimise crop growth and minimise environmental impact by modifying irrigation schedules and fertiliser applications. According to studies, the accuracy rate attained by employing AI to forecast crop maturity was greater than that of human observers. Farmers may benefit from large cost savings and better revenues as a result of this improved precision.

AI start-ups are creating farming field robots that can effortlessly do a variety of duties. Compared to humans, this kind of robot is trained to manage harvest crops more quickly and in greater quantities. Other popular robot uses include robotic weed management (Lee et al., 1999), which is based on a machine vision system and incorporates a precision chemical application system, and weed plucking (Slaughter et al., 2008). Robotic weeding is supposed to be extraordinarily accurate with the use of computer vision, saving 90% of pesticide use. These solutions use

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data analytics to determine how much pesticide is required for each field based on information about crop type, soil condition, and field history. This appears to be mostly advantageous since manually controlling weeds by hand is a labor-intensive, arduous process that requires a lot of manpower. Computer vision analyses the size, shape, and colour of leaves to differentiate weeds from crops when paired with machine learning. Robots that perform robotic process automation (RPA) activities, such autonomous weeding, can be programmed using such systems.

According to Gibbons (2000) and Waheed et al. (2006), advanced information processing technology for timely in-season crop management like variable rate technology, airborne and satellite remote sensing, multispectral and hyperspectral ground-based, computer modelling, global positioning systems (GPS), geographic information systems (GIS) are innovative system approaches on which precision agriculture is based.

Diseases of plants are a significant barrier to yield growth. These diseases are influenced by a number of variables, including genetics, soil type, rain, dry weather, wind, temperature, etc. Managing the impacts is difficult because of these variables as well as the erratic nature of some illnesses' causal influence. Computer vision may be used to classify and identify diseases using a variety of algorithms and techniques. Using Deep Convolutional Neural Networks, the corresponding illness and plant were identified with a 99.53% success rate (Ferentinos, 2018). Additionally, illnesses in crops like rice have been detected using neural networks (Phadikar & Sil, 2008).

In order to determine the acreage and track crop health in real time, businesses are integrating meteorological data and satellite photography. Businesses can identify pest and disease infestations, predict crop production and productivity, and anticipate pricing with the use of technologies like big data, artificial intelligence, and machine learning. When AI and big data analytics are combined, farmers may receive advice based on precise, up-to-date information, which boosts output and lowers expenses. On future pricing trends, demand, crop to plant for optimal profit, use of pesticides, and other matters, they may advise farmers and governments. Market demand analysis is an essential component of contemporary agriculture. AI can assist farmers in choosing the best crop to plant or market.

LIMITATIONS OF AI IN AGRICULTURE

Despite the various advancements in agriculture throughout its lengthy history, many farmers are still more accustomed to using conventional techniques. It's improbable that the great majority of farmers have ever worked on AI-related projects. To enumerate some of the limitations of AI in agriculture:

There is no getting around the reality that the initial investment in AI solutions may be highly costly, even though they can be cost-effective in the medium-to-long run. Adopting AI may not be practical for the time being given the financial struggles of many farms and agribusinesses, particularly small-scale farmers and those in developing nations.

Even though artificial intelligence (AI) has clear advantages, farmers may find it difficult to completely embrace the technology due to people's reluctance to accept unfamiliarity.

AI is still in its early stages of development, thus there will be limitations. Good models require a wide range of high-quality data, which are hard to come by in agriculture. Restrictions can make it challenging for robots equipped with sensors to adjust to shifting farming conditions.

If an AI system is just designed to maximise agricultural yields in the near term, it may overlook the environmental costs of doing so, which might eventually result in excessive fertiliser usage and soil erosion. In an effort to increase yields, excessive use of pesticides might destroy ecosystems, and excessive use of nitrogen fertiliser would contaminate the land and nearby streams.

There are several legal issues with using AI in smart farming and precision agriculture. Cyber-attacks and data breaches are examples of security risks that might seriously affect farmers. It's even possible that hackers may target AI-based farming systems.

Millions of field workers are expected to lose their jobs in the next decades, mostly as a result of artificial intelligence's effects on the agriculture sector. Expert AI farming systems that don't consider the complexities of labour inputs will ignore, and potentially sustain, the exploitation of disadvantaged communities (Tzachor et al., 2022).

CONCLUSION

The efficiency of human society's agricultural systems is largely what determines its success. There is a growing demand for improved technical solutions as traditional farming practises become outmoded. Automation has always had a major influence on sectors worldwide. Artificial intelligence will undoubtedly have a significant influence on agriculture, and digital technology is already significantly changing the sector. Artificial intelligence-driven solutions can aid with issues that the agriculture industry faces, such crop yields, soil and plant health, weeds, and disease. A large share of the world's agricultural workforce consists of smallholder farmers, whose demands and constraints must be taken into account while using AI in agriculture. The gap

may be closed by programmes that give smallholder farmers access to finance and training so they can adopt AI-based agricultural techniques. This way, farmers of all stripes may profit from cutting-edge technology that the world needs to ensure the sustainability of our food system. To conclude, Artificial Intelligence greatly alleviates the labour and resource shortage, and it will be a potent instrument for enterprises to manage the growing complexity of contemporary agriculture.

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A Conceptual Framework for the Study of Employers' Perceptions towards Employability

S. M. Goldyn Abric Sam*, N. Arun Fred**

Abstract *Graduates' employability is an important aspect concerning educational output. Employers' perceptions have been given less concentration in studies that apply the signaling theory and human capital theory. When we come across the transition from college education to employment, the employers' perceptions are crucial. This study tries to understand how the employers perceive about the graduates' value whose educational qualifications are similar. The framework is explained in three stages namely, employers' belief systems, decisions in recruitment and performance outcomes. In this framework, the employers' beliefs are influenced by various factors and mechanisms, which include initial signaling, private learning, public learning and exogenous factors. Initial signaling includes the initial triggers such as the educational credentials of the candidates. Private learning is done by the current employers where they evaluate the candidate's performance outcomes after recruitment. Public learning is the process of observation of the employee's performance outcomes by all market participants. The various exogenous factors could be the cultural environment, certain critical market conditions and companies' own policies. The conceptual framework shows how an employer, through the consecutive learning processes, would accumulate enough experience to discover the candidates' true worth.*

Keywords *Employability, Perceptions, Initial Signaling, Private Learning, Public Learning, Exogenous Factors*

INTRODUCTION

One of the basic requirement of higher education is to meet the demand of the labour market. A considerable number of studies since the 1960s, have been describing the relationships between education and employment, often with reference to either the concept of human capital (Becker, 1964; Schultz, 1961) or screening models (Spence 1973; Stiglitz, 1975; Arrow, 1973). All these studies have taken the first employment right after education. However, more attention on research was not paid to the processes of transition from education to work place until the 1990s. During that period, the graduates' career success was used as a key indicator to measure the quality of education in general, and higher education in particular (Teichler, 2009, p. 15). Since then, the educational system and students have become more responsive to the requirements of the employment system. But there is no clarity as to what is expected by the labour market keeping in mind the depletion of traditional occupations along with the employment conditions and the rapid obsolescence of knowledge (Schomburg & Teichler 2006, p. 4).

In order to respond to the put forth challenge, studies have started to focus on the employers'' views for identifying what higher education should be delivering. However, the results are diverse and even controversial. For instance, as discovered by Teichler (2009, p. 11), employers have changing perceptions of workers with similar educational qualifications, and their views vary based on different traditions, political biases and other factors.

HUMAN CAPITAL AND SIGNALLING THEORIES

With relation to the attainment of education and the outcomes of the labour market, special focus have given for either human capital theory (Schultz, 1961; Becker, 1964) or job market signaling (screening) theory (Stiglitz, 1975; Arrow 1973; Spence, 1973). We can see that both the theories have a pressing positive relationship between education and returns in labour market. But also, they miss out on the mechanisms on how education affects employment. According to The human capital theory (Schultz, 1961; Becker, 1964), education increases individuals' productivity, which consequently enhances their job performance. As such, education provides marketable skills and abilities relevant to job performance, and thus the highly educated people will be more successful in labour markets in terms of both incomes and work opportunities.

Unlike human capital theory, job market signaling theory (Stiglitz, 1975; Arrow, 1973; Spence, 1973) deals with principal-agent relationships where asymmetries of

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information exist and are not easily resolved. It is based on the premise that hiring is an investment decision for employers. When making decisions, employers take into account signals, for instance, conveyed by levels of educational attainment. In some places, signaling theory is called screening theory, which is explained as job seekers send signals about their ability level to employers by acquiring certain educational credentials, while employers screen the job applications according to the signals that the educational credentials transmit. Therefore, educational credentials become a kind of proxy measure of quality or ability.

BAILLY'S MODEL OF EMPLOYERS' BELIEFS

Bailly describes the development of employers' belief systems in three sequential stages. In the first stage (Fig. 1), an employer who has no experience of hiring job applicants with certain types of education credentials makes recruitment decisions based on his/her initial beliefs about the applicants, or ''conditional probabilistic beliefs'' in Spence's (1973, p. 359) term. Specifically, the employer tends to attribute an anticipated level of productivity to these people depending on the information transmitted by job-applicants' educational credentials, and then makes recruitment decisions based on that. The information conveyed by the educational credentials can be understood as initial signals. The second stage (Fig. 2) commences when the applicants are recruited.

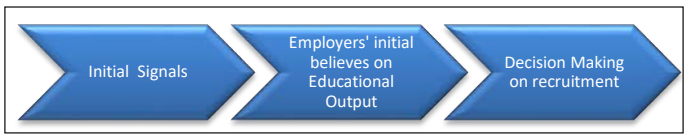

Fig. 1: Development of an Employer's Beliefs

When the employer has more experience of hiring certain educational credential holders, the initial signal effects tend to become less influential. By observing the quality of these recruited employees, the employer's initial beliefs are adjusted. If the employees' performance is thesame as assumed by the employer before the recruitment, the employer's beliefs will be self-confirmed. Otherwise, the employer will correct his beliefs. ''When he next comes to recruit, an employer will rely on his (new) beliefs, which he will adjust again depending on the difference in productivity observed after recruitment'' (Bailly, 2008, p. 962). The third stage can be found when the process continues until equilibrium is reached. That means the employer, through these successive learning processes, has accumulated enough experience to discover the candidates' 'true' value.

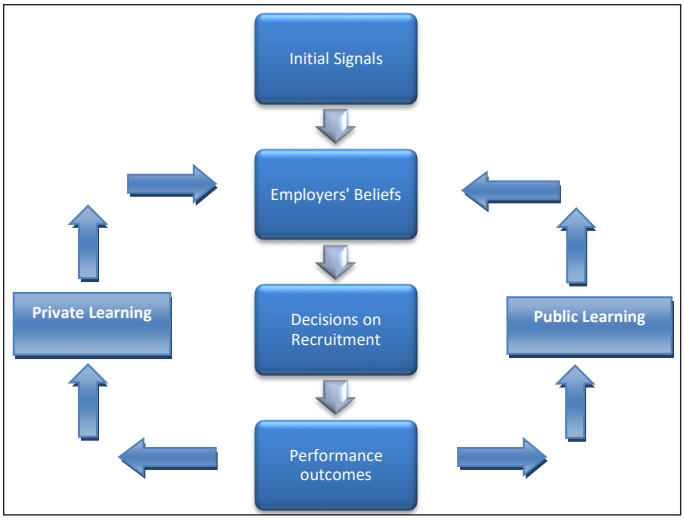

Fig. 2: Private and Public Learning Processes

INSTITUTIONAL THEORY

Bailly's (2008), statement that employers make recruitment decisions based on their belief systems reflects one of the central ideas of the new institutionalism (Meyer & Rowan, 1977; DiMaggio & Powell, 1983), holding that human actions are driven by institutions. Institutions can be generally understood as social orders (Berger & Luckmann,1967), social rules (Burns & Flam, 1987), or taken-for granted norms and beliefs (Scott, 2001), which are seen by actors as natural, rightful, expected, and legitimate. In other words, they are institutionalized beliefs and practices.

DEFINITIONS OF ACTORS AND INSTITUTIONS

Institutional theory has become a popular and powerful explanatory tool for actions of both individual and collective actors (Dacin et al., 2002, p. 45). It mainly stresses the dependency of actors' actions on institutions, such as wider environmental contexts, rules and norms (Meyer et al., 2007, p. 188). Actors can be individuals, groups, organizations and communities (Burns & Flam, 1987, p. 2). Among those actors, the individual ones are important subjects, because ''outcomes at the system level are thought to be determined by the interactions of individuals acting consistently in terms of the axioms of individual behaviour'' (March & Olsen 1989, p. 5). In this study, the actors are employers, defined as ''those responsible for recruitment in employing organizations effectively act as gatekeeper to the labour market'' (Maguire, 1992, p. 80). Their attitudes towards jobseekers are crucial in the final recruitment decisions.

INTERACTIONS BETWEEN EMPLOYERS AND INSTITUTIONS

According to institutionalism, individuals' internal interpretive processes or private beliefs are shaped by external institutional frameworks. The development of employers' beliefs as well as external institutional frameworks can be respectively explained by ''actor structuring'' and ''system structuring'', the concepts developed in Burns and Flam's (1987) book—The Shaping of Social Organization: Social Rule System Theory with Applications. Social rule theory is fundamentally an institutionalist approach to the social sciences, both in its placing of primacy on institutions and in its use of sets of rules to define concepts in social theory.

System Structuring

From the perspective of institutionalism, employers' beliefs are developed within institutional frameworks. What affects the creation of an institutional framework is a process of system structuring. Compared to actor structuring, system structuring takes a longer time. It takes place at the level of an entire group, or in an organizational field. This structuring of social system represents a process of institutionalization.

Public Learning

When some employers start to hire international graduates with similar educational credentials, the performance outcomes of the employees will become benchmarks for the employers to adjust their beliefs. This has been described as a process of private learning. The consequences of private learning can also have an impact on the reproduction of institutions in the organizational field through public learning. For instance, some employers may imitate other companies that have been successful in recruiting international graduates in terms of enhancing productivity. As such, the collective sense-making is developed through mimetic learning.

Formation of Initial Signals

Some initial signals exist, before either private or public learning processes. Where do these signals come from? How do the employers perceive these signals? Such signals are also developed within the institutional framework through a process of system structuring but with different actors and mechanisms involved. Fig. 3 gives the entire framework portraying the factors and mechanisms affecting employers' beliefs.

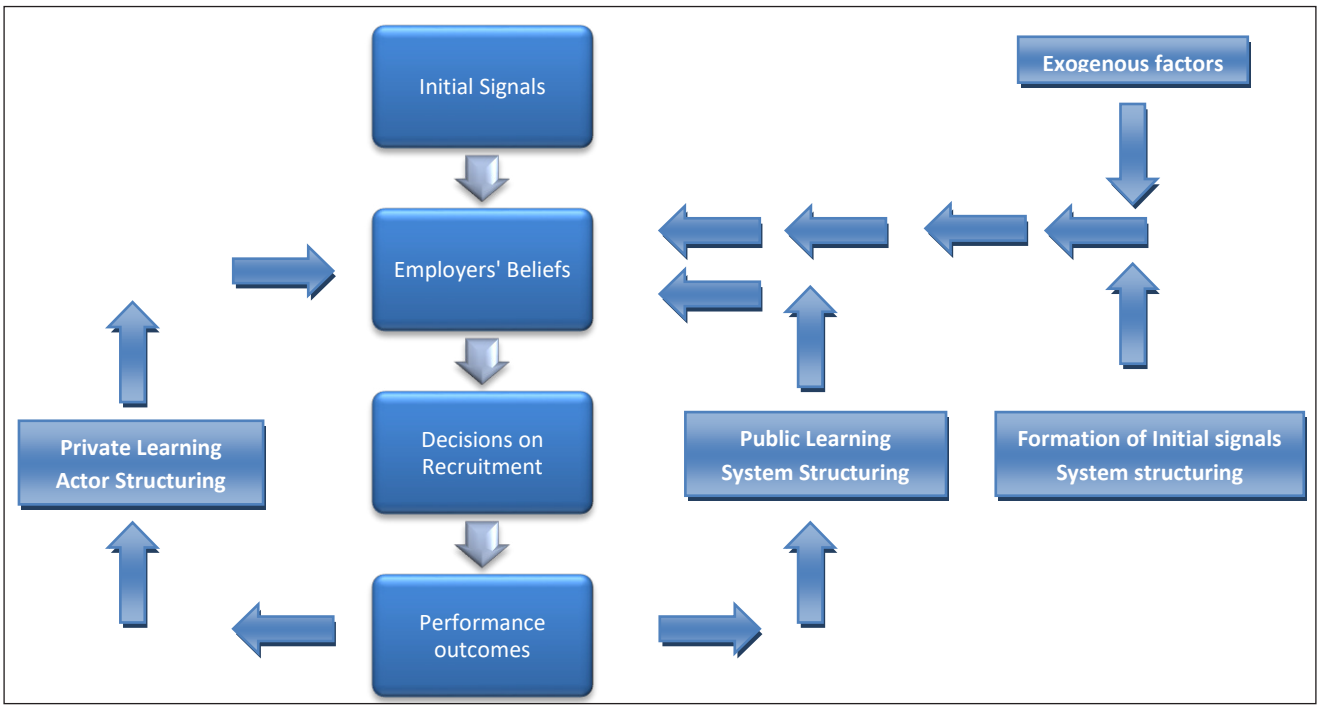

Fig. 3: Factors and Mechanisms Affecting Employers' Beliefs

CONCLUSION

As indicated by the private learning mechanism, what eventually shapes employers' beliefs on educational output lies in a graduate's actual productivity and performance at his or her workplace. Therefore, students must be aware that gaining an education degree without actually increasing their relevant knowledge and skills will not make them more successful in the labour market. Universities should provide support for their students' preparation for the workforce, with special attention to the relevance of their education programmes to the labour market's needs and the quality of the graduates. According to the conceptual framework constructed in this study, some purposeful actions can influence the employers' beliefs, both in shaping the initial signals and in facilitating the public learning process. As a final point, it should be noted that the conceptual framework contributed here is still at an early stage of developing a theoretical model. In order to develop specific statements about the relationships between variables, the framework needs to be further examined in specific contexts and verified by empirical data.

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Effectiveness of Artificial Intelligence in HR Practices on Employee Engagement with Reference to IT Industries in Chennai

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Abstract *This study aims to examine the impact of artificial intelligence-based HRM strategies on employee engagement in the IT sector. The Industrial Revolution (IR) is significantly influenced by artificial intelligence (AI). In areas where there is enough data and where that data can be utilized to improve the effectiveness of human resource management, AI has the potential to transform HR practices. It will demonstrate the link between independent aspects training and development, performance assessment and job satisfaction using artificial intelligence and employee engagement. The authors also examine the current academic framework for AI adoption in HRM as well as applications of AI in HRM. The results provide a thorough examination of the connection between employee engagement and AIHRM, the identification of knowledge gaps in this area, and the effects of AI on HR practices. The research suggests as AI-powered tools and apps, to investigate the potential impact of AI performance on workers' job engagement, service, and results. When it comes to tracking and analyzing employee engagement, the majority of businesses still use traditional survey methods to assess engagement on an annual or longer basis. The dimensions and effects of engagement have become abundantly clear to us thanks to these practices, but it's time to reconsider how we measure it and, more importantly, how we can use the same digital tools to increase worker productivity, retention, and satisfaction. In order to address this contemporary trend of how technology advancements affect engagement measurement as well as the use of human resource management (HRM) techniques to increase engagement, we suggest a number of study subjects.*

Keywords *Artificial Intelligence, Human Resources Management, HR Practices, Employee Engagement, Employee Retention, Machine Languages*

INTRODUCTION

By 2022, the value of businesses produced by AI will reach $3.9 trillion, predicts Gartner (Gartner, 2018). Due to the vast amount of underutilized data that HR possesses, it may take the lead in technical advancement and create commercial value with AI-powered solutions. Artificial intelligence requires vast amounts of data in order to work properly, which calls for sufficient management and storage. Businesses would require more staff to operate and maintain the complex software. By using AI technologies to assess the data and assign tasks to employees, HR managers may effectively utilize AI in their operations. In HRM, technology has been utilized to improve employee engagement, provide customized vocational training and evaluate diverse HR data in order to make business-critical choices (Dorel & Aleksandra, 2011).

Artificial intelligence (AI) has been progressively incorporated into company management decision-making, taking on and assisting managers in expediting their everyday, laborious, and repetitive tasks. It provides powerful database and analytical support, allowing managers to get out of mechanical work and engage in more valuable work (Partridge & Hussain, 1992). The Accenture Strategic Report states that the influence and utility of intelligent technologies may alter the manager's job contents in the areas of coordination and governance, employee and community relations, problem solving and teamwork, strategy, and innovation. Managers who do repetitive and laborious tasks on a daily basis might benefit from the assistance of artificial intelligence.

Positive attitudes toward the business and the organization's values are the hallmarks of employee engagement. Management may identify intangibles like employee engagement levels and get insights into what influences them and how to raise them by utilizing AI-based tools, software, and technology. Employers may greatly benefit from the adoption of AI- based software by using it to forecast employees' attitudes and actions through predictive indications, in addition to determining each employee's

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degree of engagement. As a result, the business may actively keep important personnel. Sari, Min, Purwoko, Furinto and Tamara (2020). Deep learning, which mimics adaptive human decision- making, has evolved into a common practice in some data-rich environments through the use of neural networks (Raub, 2018). However, not many companies have advanced to the big data stage of personnel management, where the potential has been clearly expressed in sufficient judgments.

Maintaining employee engagement is essential to an organization's survival. An tailored and personalized approach to employees is made possible by the communicative and Interactional aspects of AI applications in HRM. AI-based solutions are becoming more and more prevalent in many areas of HR business operations, which improves employee experiences and work satisfaction. Nonetheless, the influence of AI-mediated HRM practices is still being investigated in this exploratory study arena (Dutta, Mishra & Tyagi, 2023). Moreover, unwillingness is also observed for the adaptation and investment of AI in businesses who are functioning businesses globally. Employee engagement (EE) has several beneficial effects that can benefit not only the employee and his or her team but also the organization as a whole and the company's bottom line. Organizations are eager to embrace artificial intelligence (AI) if it can be utilized as a tool to support equitable employment (Saxena & Mishra, 2023).

Artificial intelligence: the way ahead for employee engagement in corporate India. Global Knowledge, Memory and Communication. Since companies may use their workers' abilities and talents to gain a sustained competitive advantage, employee engagement is a crucial component of human resources (Park & Choi, 2019). The effectiveness of earlier employee engagement strategies has decreased due to shifting HR practices and workforce generation. Additionally, during the pandemic, some firms primarily employed digital or AI technologies to guarantee the seamless operation of various operations (Chanana & Sangeeta, 2020). Many academics and researchers have already examined employee engagement in order to manage and retain talent (Guest, 2014; Shuck & Reio Jr., 2014; Pugh & Dietz, 2008; Meyer & Gegne, 2008; Bhuvanaiah & Raya, 2014).

"The ability to engage employees, to make them work with our business, is going to be one of greatest organizational battles in the coming 10 years," according to Mike Johnson, who also made this statement in his book, The New Rules of Engagement (Johnson, 2004). Therefore, this study has tried to identify the role of AI innovation in engaging employees by reviewing the literature.

LITERATURE REVIEW

Employee Engagement

Employee engagement is defined as a level of commitment and involvement of employees in their organizational tasks and duties (Anitha, 2014). When employees are engaged in organizational activities then, they focus on achieving organizational goals and motives. With their positive attitude they also motivate their colleagues and maintain a positive work culture in the organization. Engaged and motivated employees work beyond the defined rules and time schedules to complete their duties and goals. Employee engagement is a strategic tool for organizations to leverage upon the talent of their employees in order to attain sustainable competitive advantage (Baumruk, 2004).

AI has become an essential tool for promoting employee engagement as it helps businesses to identify the unique needs of each employee and provide them with tailored support (Mellam, Rao, & Mellam, 2015). Organizational productivity is closely tied to individual employee performance, which in turn is linked to employee engagement, a critical factor for remaining competitive in the market (Rao, Chitranshi & Punjabi, 2020). Traditional annual surveys have been the primary method for HR to gauge engagement levels, but the emergence of AI tools enables real-time individual data and insights.

Artificial Intelligence is being utilized more and more in human resource management, particularly in the area of employee engagement, which is crucial to workforce management. Thanks to developments in artificial intelligence (AI) and machine learning, companies may now leverage new technologies like sentiment analysis, natural language processing, and real-time performance monitoring to increase employee engagement.

AI combined with employee engagement can result in more output, better communication, and a team-oriented workplace (Mittal, Jora, Sodhi & Saxena, 2023, March). Artificial intelligence offers significant promise in enhancing employee engagement by providing 24/7 assistance and support for both off-site and on-site employees, real-time performance measurement, better learning and development activities, and AI-driven solutions for conflict resolution (Rao, Chitranshi & Punjabi, 2020).

AI technologies can improve information accuracy and automate tedious processes, resulting in increased employee engagement (Mahmoud, Shehnaz Tehseen & Leonora Fuxman, 2020). to create a better employee experience, AI and human intelligence are frequently integrated, resulting in

the automation of repetitive HR tasks and process redesign. Instead of reducing human interaction, digital automation AI provides HR staff with more time to connect with employees, managers, and candidates to better meet their needs (Zel & Kongar, 2020, September).

Employee engagement has become an increasingly important topic in the realm of human resources management. Engaged employees are more productive, motivated, and committed to their organization, resulting in higher levels of employee retention, job satisfaction, and overall organizational performance (Markos & Sridevi, 2020). In recent years, artificial intelligence (AI) has emerged as a powerful tool for enhancing Employee engagement. Providing individualized experiences for individual employees is one of the key ways AI may boost employee engagement.

AI solutions can be used to analyze employee data and make personalized recommendations for training, development, and career promotion. This not only serves to increase individual employees' skills and knowledge, but it also shows them that their firm is invested in their success and growth. AI can also help improve staff communication and collaboration. Chatbots, for example, can be used to give employees immediate access to HR resources such as benefit information or answers to frequently asked queries. This not only saves time but also improves employee satisfaction by providing them with the information they require to succeed (Microsoft, 2019). Another way that AI might boost employee engagement is by minimising hiring prejudice. Conventional recruiting processes are frequently influenced by unconscious prejudices, which can result in the selection of less diverse and less qualified candidates for employment.

In contrast, AI techniques can be used to analyse resumes, job descriptions, and interview transcripts in order to discover potential biases and make more objective hiring decisions. Overall, the use of AI in employee engagement is quickly expanding, with considerable potential benefits. AI can help firms enhance employee engagement, retention, and overall performance by creating tailored experiences, improving communication and cooperation, and minimizing prejudice in the recruiting process. But, like with any new technology, there are potential hurdles and hazards to using AI in the workplace, and more research is needed to properly understand its impact on employee engagement.

PROBLEM STATEMENT

Employee engagement is most serious issue facing Indian IT sector due to shortage of skilled labor, economic growth and employee turnover. It is not only important to have the best and the most talented employees but it is equally necessary to be able to retain and engage them for long period of time. There are many factors which affects the engaging of employee. Today's highly mobile population is not limited to any one career, and the global economic expansion of the past several decades has created more options. Any organization's lifeblood is its human resources. Human resources are still needed to operate the technology, even if the majority of firms these days are determined to be technology driven. They are the most vital and dynamic resources of any organization. This study reveals that Artificial Intelligence in HR Practices on Employee Engagement with reference to IT Industries in Chennai.

RESEARCH OBJECTIVE

- To study the impact of AI training on employee engagement in the IT industry.
- To examine the demographic variables that contributes to employee engagement.
- To study the impact of AI performance appraisal on employee engagement in the IT industry.
- To study the impact of the Job satisfaction on employee engagement in the IT industry.
- To study factors affecting AI in HR Practices through employee engagement in the IT industry.

RESEARCH DESIGN

Primary as well as Secondary data were used for this research. Online Questionnaires were constructed and gathered from employees as the Primary data. Secondary data was collected from published Articles, Books, Journals, Internet resources etc. Likert's five-point scales were applied with scales covering as "Strongly agree, Agree, Neutral, Disagree, and Strongly Disagree". Convenient Sampling method was used to collect the sample and the sample size was 117. Questionnaires were distributed among 160 respondents of which finally 117 were taken for this research after deleting or modifying of data. It has been circulated through Google forms and the data was segregated. SPSS-25 were used for this research. Cronbach's alpha, Chi square test, Regression, Pearson's correlation were used.

RELIABILITY OF THE SURVEY INSTRUMENT

Cronbach's alpha, the dependability coefficient indicator, indicates how strongly the variables are optimistically linked with one another (Saluja & Sharma, 2019). The Cronbach's alpha came out to be 0.963, which is considered a good indication of reliability as it is more than 0.7.

Table 1

Reliability Statistics		
Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**N of Items**
.900	.963	29

DATA ANALYSIS AND INTERPRETATION

Objective 1: To study the impact of AI training on employee engagement in the IT industry. Objective 2: To study the impact of AI performance appraisal on employee engagement in the IT industry.

Objective 3: To study the impact of the Job satisfaction on employee engagement in the IT industry.

Objective 4: To study factors affecting AI in HR Practices through employee engagement in the IT industry.

Test of Hypothesis

$H_{01:}$ AI training has no positive effect on Employee engagement.

$H_{a1:}$ AI training has a positive effect on Employee engagement.

$H_{02:}$ AI Performance Appraisal does not affect Employee engagement.

$H_{a2:}$ AI Performance Appraisal has an effect on Employee engagement.

$H_{03:}$ Job satisfaction has no positive effect on Employee engagement.

$H_{a3:}$ Job satisfaction has a positive effect on Employee engagement.

Table 2

Correlations				
	AIT	**AIPA**	**JS**	**EG**
AIT	1	.710**	.814**	.691**
AIPA		1	.794**	.803**
JS			1	.767**
EG				1

**. Correlation is significant at the 0.01 level (2-tailed).

*Inference***:** The correlation analysis illustrates the link between the two variables as well as the interaction between one and the other. Its value is always between -1 (Strongly negative relationship) and +1 (Strongly positive relationship) (Strongly optimistic relationship). If the value of correlation is "0," it means there is no relationship between two variables. We may determine from the table above that all of the variables are positively connected with one another. The above table indicates that AI training has a strong positive relationship with employee engagement. Pearson correlation r= 0.691 significant at p<0.01. There is moderate

Positive effect of AI appraisal on the Employee engagement. Pearson correlation (r= 0.803, p<0.05). There is strong positive relationship between the Job satisfaction and Employee engagement. Pearson correlation (r=0.767, p<0.05).

Regression

Table 3

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	.833[a]	.693	.685	1.699	2.384

a. Predictors: (Constant), JS, AIPA, AIT

b. Dependent Variable: EG

Inference: R-square indicates how data are scattered around the fitted regression model. It measures the percentage of relation between the independent and dependent variable inclusively. The R square value in this study is 69%.

ANOVA[a]

Table 4

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	738.417	3	246.139	85.226	.000[b]
	Residual	326.353	113	2.888		
	Total	1064.769	116			

a. Dependent Variable: EG

b. Predictors: (Constant), JS, AIPA, AIT

Inference: The table shows the results of ANOVA. The hypothesis is further tested by ANOVA table. Since the computed p-value 0.000 is lower than the acceptable significance value of 0.01, it is concluded that AI Training, AI Performance appraisal has a significant influence on the employee engagement of the employees. The alternative hypothesis is thus accepted and the null hypothesis is rejected.

Chi-Square Test

AIT * Gender

Table 5

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.718[a]	1	.010
Likelihood Ratio	7.032	1	.008
N of Valid Cases	117		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.53

Inference: Under "Asymptotic Significance (2-sided)," the p-value (.010) is shown in the same row. If this number is on par with or below the specified alpha threshold (typically.05), the result is noteworthy. Therefore, we would reject the null hypothesis, which states that the two variables are independent of one another, in this instance since the p-value is less than the conventional alpha value. This tells us that there is statistically significant association between Gender and AI Training; that is, both Males and Females equally prefer AI training to attain employee enagagement.

AIPA * Gender

Table 6

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.171[a]	2	.000
Likelihood Ratio	3.217	2	.000
N of Valid Cases	117		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 17.76.

Inference: Under "Asymptotic Significance (2-sided)," the p-value (.010) is shown in the same row. If this number is on par with or below the specified alpha threshold (typically.05), the result is noteworthy. Therefore, we would reject the null hypothesis, which states that the two variables are independent of one another, in this instance since the p-value is less than the conventional alpha value. This tells us that there is statistically significant association between Gender and AI Performance appraisal; that is, both Males and Females equally prefer AI performance appraisal to attain employee engagement.

JS * Gender

Table 7

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.635[a]	1	.010
Likelihood Ratio	3.904	1	.008
N of Valid Cases	117		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.56

Inference: Under "Asymptotic Significance (2-sided)," the p-value (.010) is shown in the same row. If this number is on par with or below the specified alpha threshold (typically.05), the result is noteworthy. Therefore, we would reject the null hypothesis, which states that the two variables are independent of one another, in this instance since the p-value is less than the conventional alpha value. This tells us that there is statistically significant association between Gender and Job satisfaction; that is, both Males and Females equally prefer job satisfaction to attain employee engagement.

EG * Gender

Table 8

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.718[a]	1	.010
Likelihood Ratio	7.032	1	.008
N of Valid Cases	117		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.53

Inference: Under "Asymptotic Significance (2-sided)," the p-value (.010) is shown in the same row. If this number is on par with or below the specified alpha threshold (typically.05), the result is Noteworthy. Therefore, we would reject the null hypothesis, which states that the two variables are independent of one another, in this instance since the p-value is less than the conventional alpha value. This tells us that there is statistically significant association between Gender and employee engagement.

RECOMMENDATION

Businesses should use AI in their training and development initiatives to maximize the learning opportunities for their workforce. When teaching using AI technologies instead

of traditional techniques, training can result in higher productivity, engagement, and information retention. The results show that the HRM Practices through AI is able to generate and impact employee Engagement within the IT industry. This study contributes to HRM practices through AI in the IT industry, which is proving to be the one of the best strategies in resolving labor turnover. Employment security is important for providing benefits and keeping a positive reputation and brand image to the public. Through this AI for HR Practices it provide job satisfaction to the employees it reduced the labor turnover it maintain employee engagement. The engagement of employees plays a very important role in the IT Industry. When the Employees gets the AI training, they are involved more in other activities related to their work. It helps to improve the knowledge of employees, get the appraisal, and increase the job satisfaction level. Scope of the study can explore more about the pattern of AI training, AI Performance appraisal leads to employee engagement.

CONCLUSION

The above studies emphasize the role of AI Influence HR practices in Employee Engagement. It also shows the optimistic and significant relation between AI training, AI performance appraisal and employee engagement. Regression analysis also depicts the same relation. The Factors affecting employee engagement depicts the significant factor loading. AI training, AI Appraisal, and Job satisfaction are the factors that affect Employee Engagement. HRM Practices are the vital backbone in every Organization. To retain skilled and qualified employees, good HRM practices through AI must be applied across the organizational employee retention can be improved. Coaching and mentoring are seen as the most real methods of AI training facilities. By investing in the appropriate AI training programs, a company will gain benefits such as increased productivity, reduced employee turnover, and decreased need for constant supervision.

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Harnessing Fintech for Poverty Alleviation in Micro, Small, and Medium Enterprises (MSMEs)

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Abstract *"Fintech" refers to the fusion of finance and technology to enhance corporate functions and facilitate the delivery of financial services. This study aims to elucidate the role of financial technology (Fintech) in the advancement of micro, small, and medium-sized enterprises (MSMEs) in India, emphasizing its impact on poverty alleviation. Employing a descriptive research approach with a qualitative framework, the study draws upon a review of literature encompassing published research findings, government websites, and expert insights. The findings suggest that the integration of Fintech within the business landscape can effectively address common challenges faced by MSMEs, contributing to poverty reduction. Poverty, defined as the inability to meet basic needs, requires a clear understanding of these necessities before identifying individuals in need. The study concludes that MSMEs, by customizing Fintech platforms to their unique requirements, experience accelerated growth and prosperity. The implications for MSME players include improved efficiency in sourcing finance, streamlined transaction processing, expanded market reach, and expedited financial reporting.*

Keywords *Fintech, MSMEs, Poverty Alleviation, Personal Finance, Technology*

INTRODUCTION

Fintech stands out as one of the most rapidly expanding sectors attracting venture capitalists. It encompasses computer programs and various technologies that facilitate or support banking and financial services. While financial institutions form a crucial part of society, they must evolve to meet contemporary challenges and adapt to changes. Navigating shifting consumer preferences, dynamic regulatory frameworks, and escalating cybersecurity threats within budgetary constraints necessitates substantial adjustments. At the heart of this transformation lies a swift corporate revolution driven by intense digitalization and the adoption of cutting- edge technologies such as Artificial Intelligence, data analytics, and cloud storage.

The term "Fintech" specifically denotes the fusion of finance and technology to enhance corporate functions and optimize the delivery of financial services. In India, the landscape of Fintech companies is diverse, encompassing startups that specialize in lending, crowdfunding, payment processing, financial planning, remittances, and financial research. Thus far, the presence of Fintech companies has proven instrumental in fostering the growth of startup enterprises. Projections indicate that the Fintech industry's presence in India will play a pivotal role in propelling the development of micro, small, and medium-sized enterprises (MSMEs).

MSMEs routinely encounter various challenges, including constraints on capital, marketing issues, inefficiencies in financial statement preparation, and transaction processes. Lack of capital is a recurrent issue, preventing MSMEs with promising expansion plans from realizing their full potential due to insufficient funding. Historically, many MSMEs have struggled to secure additional capital from banks, primarily due to their inability to meet the stringent criteria set for loans.

PURPOSE OF THE STUDY

The study aims to achieve the following objectives:

- To evaluate the performance of MSMEs in India.
- To analyze the contribution of MSMEs to entrepreneurship development.
- To underscore the role of Fintech in poverty alleviation.

METHODOLOGY

This research relies on secondary information for its foundation. To investigate into the subject matter comprehensively, distinguished researchers conduct a thorough literature review.

Various published studies, including the MSME Annual Report 2019-20 and information from the websites of

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the Ministry of Micro, Small and Medium Enterprises, Government of India, are consulted during the research process.

FINDINGS OF THE STUDY

Investment Increase

As of May 13, 2020, the Indian government, under the Atmanirbhar Bharat initiative, made significant amendments to the definition of MSMEs. This revision involved an elevation in the investment ceiling, the introduction of additional turnover criteria, and the elimination of the distinction between the manufacturing and service sectors.

The investment limit for micro-manufacturing businesses was increased from Rupees two and a half million to Rupees ten million, while the investment cap for micro-service businesses saw an elevation from Rupees one million to Rupees ten million. For small manufacturing organizations, the investment limit rose from Rupees fifty million to one hundred million, and for small service businesses, it increased fivefold from twenty million to one hundred million. Medium manufacturing firms experienced a twofold increase in the investment cap, moving from one hundred million to two hundred million, while medium-sized service-rendering organizations saw a fourfold increase, moving from fifty million to two hundred million. The new turnover upper limits are fifty million for micro-enterprises, five hundred million for small-sized businesses, and one thousand million for medium-sized businesses.

Digital Transactions

The Ministry of MSME has implemented various initiatives to digitally empower the entire MSME ecosystem. A committee on Digital Payments, chaired by the Secretary of MSME, was established in line with the recommendations of the Committee of Secretaries and the guidelines of MeitY to ensure the successful implementation of the "Digidhan Mission". The offices of the Ministry of Micro, Small and Medium Enterprises are now digitally accessible.

Several efforts have been undertaken to raise awareness about diverse payment methods, such as BHIM, UPI, and Bharat QR code, among MSMEs registered under UAM. In the fiscal year 2020-21, digital transactions for the Ministry and its associated offices, including KVIC, Coir Board, NSIC, MGIRI, NIMSME, and O/o DC (MSME), surged to 92.02 percent in terms of value and 90.19 percent in terms of the number of transactions.

The Ministry of MSME was honored with the Open Data Champion Award (2020) from the Ministry of Electronics and Information Technology for enabling digital platforms for all sectors of MSMEs.

Table 1

Digital Transaction for the Ministry of MSME and its attached Offices (2020-21) (Upto December, 2020)

Sl. No.	Name of the organisation	Number of Transactions					
		Total		By Digital Means		Percentages	
		No. of Transactions	Value in Rupees (In crores)	No. of Transactions	Value in Rupees (In crores)	No. of Digital Transactions (in %)	Value of Digital Transactions (in %)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	KVIC	3673719	4102.92	3202965	4059.54	**87.19**	**98.94**
2	NSIC	74534	12918.52	69938	12705.74	**93.83**	**98.35**
3	DC office (Tool Room+DI offices+HQ)	94856	954.74	88450	891.61	**93.24**	**93.39**
4	COIR BOARD	15,823	288.13	12,884	272.50	**81.42**	**94.57**
5	NIMSME	1833	9.52	1658	6.56	**90.45**	**68.91**
6	MGIRI	764	10.85	726	10.63	**95.02**	**97.97**
	TOTAL	**3861529**	**18284.67**	**3376621**	**17946.58**	**90.19**	**92.02**

Source: Ministry of Micro, Small and Medium Enterprises.

Performance of MSMEs in India

One of the indicators utilized to evaluate the performance of any sector in an economy is its contribution to the country's GDP. The subsequent information outlines the contribution of MSMEs to India's GDP:

Table 2: Contribution of Manufacturing Output of MSME in GDP

S.No	Year	Gross Value ofOutput of MSME Manufacturing Sector (in crore)	Share of MSME sector in total GDP (%)			Share ofMSME Manufacturingoutput in total Manufacturing Output (%)
			Manufacturing Sector MSME	ServicesSector MSME	Total	
1	2013-14	1798818	7.73	28.40	36.13	42.02
2	2014-15	1822777	7.81	29.60	37.41	41.98
3	2015-16	1975589	7.52	29.60	37.12	40.79
4	2016-17	1988352	7.45	30.60	38.05	39.63
5	2017-18	2053622	7.39	30.30	37.69	38.5
6	2018-19	2188584	7.27	31.70	38.97	37.47
7	2019-20	2199763	7.84	31.75	39.59	37.33

Source: Ministry of Micro, Small and Medium Enterprises.

Alleviating Poverty through MSMEs

India, the world's second most populous country with 1.25 billion people and the sixth-largest by land area at 3,287,000 km^2, faces significant challenges in poverty reduction. According to the Global Multidimensional Poverty Index from September 2018, jointly produced by UNDP and Oxford University, India had 364 million people living in poverty. The IMF World Economic Outlook estimates that the COVID-19 pandemic will lead to 690 million people in India living in poverty by the end of 2020, marking a substantial 47.25 percent increase within two years.

The overarching challenge is to generate employment opportunities to mitigate poverty levels. The World Bank anticipates a 5.2 percent contraction in the global economy in 2020, with a 3.6 percent decline in per capita income, exacerbating the issue of poverty in India. The United Nations' primary goal in sustainable development is poverty reduction, a target set to be achieved by 2030.

The aftermath of COVID-19 has intensified the mission, as more people are at risk of falling below the poverty line. Local MSME enterprises are positioned to play a crucial role in a country like India, historically serving as a significant source of employment, particularly for vulnerable members of society employed in various sectors.

Unemployment lies at the core of the poverty problem, as meaningful employment is essential for meeting basic needs and preventing financial hardship. MSMEs have the potential to be a game-changer in poverty alleviation, supported by data indicating that rural MSMEs contribute to self-employment and salaried positions, employing over 1,109 lakh individuals in more than 633 lakh MSME entities. Micro, Small, and Medium Enterprises, employing labor-intensive techniques, have the capacity to generate more jobs than larger corporations. They play a vital role in helping low-income individuals earn a livelihood and improve their socioeconomic status. Moreover, as they are predominantly situated in remote rural areas, MSMEs provide meaningful employment without displacing residents from their homes, making them the primary source of non-farm employment in rural India.

Fintech Support for MSMEs in India

Several initiatives and collaborations showcase the growing support of Fintech in empowering Micro, Small, and Medium Enterprises (MSMEs) in India:

- In November 2021, the Small Industries Development Bank of India (SIDBI) partnered with Google to trial social impact financing, providing financial support up to Rs. 1 crore (US$ 133,939.60) to micro firms at reduced interest rates. Google India Pvt. Ltd. pledged a corpus of US$ 15 million (Rs. 110 crore) for smaller firms in response to the COVID-19 crisis.
- Freightwalla, a digital freight forwarder, introduced a shipment tracking solution in November 2021, employing predictive analytics to help MSME exporters and importers mitigate shipment delays and enhance supply chain efficiency.
- The supply chain financing (SCF) platform Cash Invoice announced in November 2021 its plan to assist MSMEs with over Rupees Ten thousand crore (US$ 1.33 billion) in financing in the coming year after securing one million US dollars in pre-Series A funding from Accion Venture Lab.

- In October 2021, Sundaram Finance and the MSME Development Institute (Chennai) provided marketing assistance to MSMEs, emphasizing entrepreneurial development through incubator programs to nurture new product concepts.
- Tamil Nadu-based MSME Aerospace Engineers Private Limited secured a contract from Boeing in September 2021 to manufacture and supply crucial aircraft components.
- Walmart's supplier development initiative, Vriddhi, completed its first phase in September 2021, training over 2,500 MSMEs through Flipkart.
- Flipkart launched 'Flipkart Boost' in September 2021 to support digital-first consumer brands and bolster MSMEs.
- In August 2021, the National Small Industries Corporation (NSIC) joined forces with HDFC Bank to provide credit support to the micro, small, and medium enterprise sector.
- The US Agency for International Development and the US International Development Finance Corporation collaborated with Kotak Mahindra Bank in August 2021 to assist MSMEs.
- Facebook India introduced the Small Business Loans Initiatives in August 2021, aiming to facilitate speedy access to financing for small and medium enterprises through independent lending partners.
- Indian Bank launched 'MSME Prerana,' an online business mentoring program for MSMEs in Odisha, in August 2021.
- In July 2021, Amazon India announced the expansion of its fulfillment centers to strengthen its position in the country, providing job opportunities.
- Razorpay, a provider of surrounded finance solutions, initiated TERA Finlabs in July 2021 to enhance its data-driven risk management, capital solutions, and credit underwriting skills for better financial services to MSMEs.
- Amazon India established Digital Kendra in Surat in July 2021, the first brick- and-mortar resource center aiding 'kiranas' and small companies to go digital.
- The Federation of Indian Export Organisations and Aramex India signed an MoU in July 2021 to promote MSME exporters in India.
- In June 2021, Tide, a UK-based corporate financial platform, announced plans to invest over Rs 1,000 crore (US$ 134.21 million) in India over the next five years to tap into the growing SME market.

The coordination of government and local institutional entities, combined with the effective use of local resources, enables MSMEs to contribute more productively. Supporting MSMEs in their efforts to reduce poverty and inequality is crucial, addressing the unique challenges faced by micro, small, and medium-sized businesses with special attention to micro-businesses. The establishment of the Micro-Units Development and Refinance Agency Bank is one of the government's steps to enhance economic and social conditions in rural areas and the non-agricultural sector.

Government e-Marketplace

The Ministry of MSME has initiated measures to facilitate the enrollment of MSMEs on the Government e-Marketplace portal. This includes incorporating a dedicated button in the Udyam Registration online form, allowing MSMEs to express their interest in joining the Government e-Marketplace. As of January 11, 2021, the Government e-Marketplace portal reports the following statistics regarding the total MSEs onboarded and their order worth:

Table 3

Number of MSE Sellers & Service Providers	Orders value (MSE %)
409,937	57.8

Source: Annual Report 2020-21.

E-Mails have been sent to all Udyog Adhaar Memorandum holders, encouraging their participation in the Government e-Marketplace. The UAM Database is now accessible on the Government e-Marketplace, facilitating the provisional and automatic onboarding of all MSMEs on the portal.

- Fintech has witnessed consistent development across various sectors in India, providing MSMEs with avenues to access capital, embrace digital payments, enhance market share, and address financial reporting challenges. Research suggests that this business model offers greater flexibility, security, efficiency, and potential compared to traditional financial services.
- The user-friendly nature of Fintech empowers MSMEs to focus on their core business activities, fostering competition and enabling global growth. This aligns with research findings, emphasizing that MSMEs thrive in supportive settings or ecosystems.
- MSMEs have faced impediments in their development journey. The introduction of Fintech introduces a new dynamic to MSMEs. The Indian government recognizes the importance of the Fintech industry in expediting MSME growth, as indicated by the issuance of various restrictions by the Financial Services Authority and Indian banks.
- Fintech is designed to address a myriad of issues faced by MSMEs. Each Fintech platform offers unique

services, enabling MSMEs to leverage multiple Fintech solutions simultaneously.

- Peer to Peer Lending is a Fintech company specializing in providing capital loan services for debtors. All processes are conducted digitally, ensuring transparency for prospective loan recipients.
- This business strategy aligns with the current government policy, aiming to minimize physical separation due to the COVID-19 pandemic. However, considerations such as the completeness of requisite paperwork must be addressed.
- Fintech firms, unlike traditional financial services in the capital market, have the capability to innovate and create novel financial products and services.
- Fintech e-wallets facilitate digital payment transactions, offering a more convenient, faster, and cost-effective procedure. Consequently, digital bookkeeping becomes a crucial consideration for MSMEs as they expand their operations.

CONCLUSION

Continuous and vigilant government monitoring is imperative for the success of such initiatives. To foster the growth of MSMEs and consequently contribute to rural development and poverty reduction, the government should provide consistent financial, infrastructural, and technological support. The thriving of MSMEs directly correlates with the country's progress in poverty reduction and rural development. Industry Fintech plays a crucial role in delivering solutions that facilitate the accelerated expansion of MSMEs in India.

Government oversight of these programs should be sustained and comprehensive. MSMEs need steadfast support from the government, encompassing financial, infrastructure, and Technological interventions, to generate more employment opportunities and significantly contribute to rural development and poverty alleviation. As MSMEs flourish, the positive impact on poverty reduction and rural development in the country becomes more pronounced. Fintech solutions from the industry further enhance the capabilities of MSMEs in India, enabling them to expand rapidly.

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XIBA was started in August 2012 as the Department of Master of Business Administration, approved by AICTE and to Manonmaniam Sundaranar University, Tirunelveli. Xavier Institute of Business Administration (XIBA) offers a 2-year Master's programme (M.B.A.). It is a Jesuit B School run by Jesuits of Tamil Nadu, who run LIBA Chennai, XLRI-Jamshedpur, XIM – Bhuvaneswar and JIM –Trichy. XIBA has elevated as Research Centre in Business Administration in the Year 2019. XIBA is in a lush green environment inside the St. Xavier's College and has a team of well qualified and highly dedicated faculty, is led by Jesuit priests, who together strive towards holistic development of the students. XIBA since then has grown in strength and is actively working with Industries in this region to develop future leaders who are driven by Excellence and Ethics. XIBA has produced over 400 managers and has admitted its 9th Batch of students in July 2021.

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